THE SOUTHERN CABINET.

VOL. 1. FEBRUARY, 1840. No. 2.

For the Southern Cabinet.

NOTES ON EUROPEAN AGRICULTURE,

BY A CHARLESTONIAN.

NUMBER TWO.

I STATED in a former number, that in my opinion, England was in a higher state of cultivation than any other country in Europe. This is in part owing to the industry of its inhabitants—to the intelligence of those under whose direction the lands are cultivated—and not a little to the climate itself. The persons connected with agriculture in England may be divided into three classes. First—The owners of the soil. These are, in the majority of instances, composed of the wealthy nobility. The property is usually entailed, and the laws of primogeniture assign it to the eldest son. He seldom cultivates his lands, but hires them out in large tracts to the second class—the Farmer. This individual leases the land, commonly for a term of nineteen years. He is usually well educated and intelligent, and is able to introduce those improvements in agriculture which the lights of science, and the experience of others encourage him to adopt. The manual labour is performed by the third class—the Peasantry. These are usually poor and ignorant, and have scarcely any hope of rising beyond the condition of serfs. They are the cultivators of the soil from generation to generation, and the sons and daughters, in nearly all instances, follow the condition of their parents. This is the class, which, above all others, is most benefited by a removal to America. In England, provisions are high, and the price of labour cheap—in America, it is, in general, the reverse. Here, the industrious husbandman is soon rescued from a state of dependance and poverty. Lands in our new settlements can be purchased at a less cost than the taxes would amount to in England. Hence the difficulty of obtaining labourers on our American farms, will, for a long time, present a serious obstacle to our improvements in agriculture. Man every where struggles for independence, and he will not labour for others when he has so fair a prospect of becoming the owner of a farm. But the strange and wayward climate of England, unpleasant and uncomfortable, as it may be in many respects—may give us a clue to the secret of its fertility. With the latitude of Labrador, its winters are less severe than those of Maryland. Surrounded on all sides by contending oceans and currents, it partakes of their variable climate—it is a land possessing the

atmosphere of the sea. The Gull and the Tern fly over it as if it were a part of their possessions, and the Solan goose and other sea-birds not only nestle among the beetling rocks, but their notes are heard in every part of the island. Within three days sail of England, the fogs and drizzling rains commenced. My journal tells me there was but one day out of forty in which it did not rain during some portion of the day. I heard no thunder—nor did the rain fall in torrents as is often the case with us, but light showers were continually sprinkling the earth like heavy dews—then the sun would shine for half an hour, throwing its rays in fitful streams through the passing clouds, giving slight indications of fair weather, which soon ended in disappointment. There is no calculating on a dry day in England. An umbrella is almost as necessary an appendage to an Englishman as a hat. It is no wonder that he is enraptured with the bright clear sky of Italy, for he was born among fogs, and has all his life time been looking through a haze. He judges by contrast. Others have told the tale of the azure skies and balmy air of Rome and Venice, and his imagination has been fired by the theme, hence he conceives no sun so bright, no air so soft. Had Carolina been as accessible and could he as easily have made the contrast, he would, if not blinded by prejudice, have admitted that no Italian sky exceeded that of our own Southern land. Men may boast of having climbed the Alps to see the sun rise from the mountain of Riga, or set in the Adriatic, yet I am either so prejudiced or old fashioned as to believe that the poet or the painter may go to the ends of the world and find no fairer sky for the embelishment of a picture than that presented during summer, along our Southern Atlantic coast.

But to return to the foggy climate of England. It has appeared to me that these incessant slight showers in a high Northern latitude, (where the nights are so short, and the continuance of twilight so long, that I find it noted in my journal that I was reading by day-light at half past ten in the evening, and resumed my book at half past two—leaving but four hours of night)—contribute, in a considerable degree, to the abundant productions of the soil. The sun, during the long days of summer, imparts sufficient warmth to the nourishment of the plants, and these are continually kept fresh and green by nature's watering pot. It is true, the early part of the summer of my visit (1838,) was characterised as rainy in every part of Europe, still it was not regarded in England as a very striking exception to their ordinary seasons. To the fogs and drizzling rains, together with the absence of too bright a light, I ascribed that rich dark green of the fields which I have never witnessed in any other country—the scent of the flowers was, for the same reason, stronger and longer retained—the groves were full of melody—the goldfinch and the thrush seemed to sing sweeter after every passing shower, and the skylark carolled high in the air, in spite of the drizzling mist.

But, in addition to a favourable climate, the soil of England has the benefit of a judicious tillage. I was particularly struck with the system, almost universally adopted in regard to the rotation of crops. It should be remarked that they never cultivate two successive crops of grain on the same field. Although physiologists have not been ably fully to account for the fact, that the successive cultivation of grain or vegetables exhausts the soil, whilst a change to a different product does not impoverish the land to any considerable extent, yet it is now universally admitted, by all good husbandmen, that this is the case. Some have ascribed

this to the exhaustion of the proper food of the plant in consequence of its cultivation during successive years, whilst Decandolle, Macaire and others have accounted for it on the doctrine that plants exude from their roots certain substances poisonous to plants of the same variety, which in time renders the earth unfit for their cultivation. (See January number of the Southern Cabinet, p. 17.) As *toujours perdrix* cloyed on the appetite of the Frenchman, so the teeming earth longs for a change of food, and withholds her fruitfulness unless she be indulged. It has often been inquired why is it that a forest which has long been covered with a growth of pine, when cut down does not spring up again in pine, but in oak, gum, and hickory, and *vice versa*. The facts, in a majority of instances, are so. All plants spring from seed—there can be no spontaneous production. *Omnia ab ova* is a doctrine as old as the days of Linnæs, and nature has never departed from it. May it not then be that natnre, after having for ages nourished one kind of tree, has exhausted the properties of the soil adapted to that kind of production, and when a new forest is to be created, imparts its influence to trees of a different kind, better suited to its present state, and withholding its fertility from that to which it is no longer adapted. Be this as it may, the English farmer acts on the principle of the necessity of a rotation of crops. The result from this and other judicious modes of culture has been an increase of three fold. In Carolina, we have adopted the opposite course. Many fields have been planted in Indian corn since the days of the revolution, and the result has been that we have retrogaded from forty bushels per acre to eight, and often less.

I will now give the method of English culture in regard to the

Rotation of Crops.

1st year. Fallow crop. Irish potatoes—beans or turnips. The potatoes, as is the case in high Northern latitudes, produce small stalks, and are consequently planted much nearer in the rows than with us. Endless varieties have been produced from seed.

The beans, adapted to field culture, are the kinds usually called horse bean *(Faba vulgaris,)* Hundreds of acres are cultivated with this bean, and its numerous varieties, and the product is immense. It is used as food for cattle. I have never known it to thrive equally well in any part of America, probably owing to our warm summers. In our Southern States especially, the pods in general do not fill well, and I doubt whether it is calculated to be a productive crop. There is, however, one variety from the South of France, called the Winter Bean, (*La Féverole d'hiver,)* which is remarkably hardy and prolific. It is planted late in autumn, and stands the winters of France and England, and might be experimented on, as a winter crop, when nothing else can be cultivated with us, and it would not interfere with the crop of the following spring. The Heliogaland bean—Purple Field bean—and Alexandrian Field bean, are also varieties which the agriculturists of England and France recommended to me as probably well adapted to winter culture in our Southern climate.

The turnip crop is considered as the most valuable in England for feeding cattle. These different productions, however, require to be noticed under separate heads. I will endeavor to return to the subject in a future number.

2nd year. Wheat—the varieties are yearly increasing. At present, the kinds cultivated almost universally in the higher grounds and lighter

soils of Scotland, are the Golden Drop and Blood Red. The skins are thicker than in most other varieties, and they yield more bran. These varieties would, I think, answer well on our elevated mountainous regions. The average crop is said to be about fifty bushels to the acre. In the Lothians—the Carse of Sterling, and in the low rich soils of England—in Denmark—and the alluvial soils of Germany, I remarked that the varieties called Uxbridge and Hunter's wheat, were most cultivated, and considered most productive. The yield is from fifty to sixty bushels per English acre—the average weight per bushel is from 62 to 63 lbs.—the finest, 65 lbs. The Mengoswell's wheat is a variety of Hunter's and is cultivated on the Carse of Gowrie as a superior grain. Three new varieties have been very recently introduced. The Whittington wheat from the South of England—the Chevalier wheat from France—and the Hicklings—the latter is white in straw, but yellow in sample. Rye is not cultivated. Grass seeds are sown in the fields of wheat in the month of April. These are red clover *(Trifolium pratense)* and Rye grass *(Lolium perenne* and *Italicum.)* Calves and sheep are allowed, in autumn and winter, to feed on the young grass.

3d year. This is a Grass crop—usually a heavy one. It is sometimes cut twice, but usually only once a year, and serves as pasturage in the fall.

4th year—A crop of Barley or Oats is now raised. This is once more succeeded by a fallow crop. In this manner crops succeed each other by fours in good lands, or where the soil is inferior, another year is added for grass and pasturage—affording a wheat crop only once in four or five years, but producing in the mean time, other articles equally valuable to the farmer.

TO BE CONTINUED.

THE DOMESTIC COCOONERY.

IT is expected that during the season of 1840, great numbers of persons wil desire to try experiments in feeding silk worms, and to enable them to do so upon the most economical plan, we have prepared the following directions for fitting up and conducting a domestic cocoonery. Entire confidence may be placed in all the estimates and calculations, as they are founded upon the results of actual and judicious practice, both of European and American culturists. The Editor of this Journal has been able to establish a set of simple principles or elements, deduced from the practice above alluded to, of numerous individuals, which will enable any person to make his calculations without difficulty, viz :

1st. The average weight of leaves that each morus multicaulis tree will afford during its first season's growth, on land of fair quality, and the trees planted four feet by one apart, is ONE POUND.

2d. The average quantity of leaves consumed by each worm during its life, is ONE OUNCE.

3d. The space of shelf occupied by the worms, is as follows :

During the 1st age, 1,000 worms occupy ¼ of a square foot.
" 2d age, " " " ¾ " "
" 3d age, " " " 2 square feet.
" 4th age, " " " 6 " "
" 5th age, " " " 18 " "

4th. Three thousand worms will make one bushel of cocoons.

5th. One bushel of cocoons will make one pound of raw silk, ready for market.

6th. One pound of cocoons will produce one ounce of eggs.

Thus, 1,000 trees will feed 16,000 worms the first year; these will require 288 square feet of shelf, or 8 shelves, 12 feet long and 3 feet wide. They will produce 5⅓ bushels of cocoons, or the same number of pounds of merchantable raw silk.

These simple elements, and all calculations founded on them, it must be borne in mind, refer exclusively to the *natural system;* that which all persons will practise in a domestic cocoonery.

Any common room may be used for the cocoonery. It ought, however, to have one or more windows on each side, and if it have a fireplace, it will be all the better for it. The second story of the house will be better for the worms than the first, though it is not so convenient for the attendants. If it be desired to fit it up temporarily for the cocoonery, the following plan will answer every purpose, without the least injury to the walls, or any thing else; and after the cocoons are gathered, the shelves can be removed, and the lumber used for other purposes.

Suppose the room to be 20 feet long, and 16 feet wide. Make three trestles, such as carpenters use, out of scantling, 3 feet long, 1 foot high, with 4 legs. Set one in the middle, and one near each end of one side of the room, and lay upon them 3 plank, 16 feet long, and 1 foot wide; thus making a temporary table, 16 feet long and 3 feet wide. A tin pan can be placed under each foot of the trestles, to be kept full of water to prevent ants and other vermin from getting upon the shelves. They can be obtained very cheaply at every tin-shop, and are effectual preventives of such evils. A second shelf may be placed upon the first, by fixing the trestles directly over those below, and a third, fourth, fifth and sixth in the same way. The trestles should be made to stand firmly and level, with the legs expanded, that they may act as braces to steady the range of shelves. The plank need not be nailed down, if it be an object not to injure them; but the shelves would be more steady and firm if this were done. In setting up these shelves, a space ought to be left between them and the wall, to prevent ants, &c getting upon them from that quarter; a few inches will be sufficient. In a room of the above dimensions then, we shall have three ranges of shelves, 16 feet long, 3 feet wide, with an alley of 3 feet between each range, &c. and a space at each end, to pass freely.

If we put 6 shelves in each range, we shall have 18 shelves, 16 by 3 feet each, and these will contain 48,000 worms. The plank shelves should be covered with old newspapers or any other waste paper.

The management of the silk worms on this plan, may be as follows:— Expose the eggs to hatch in the usual manner. Pay no attention to those that hatch the first day. Those that hatch on the second day, should be placed on the first range of shelves; those that hatch on the third day, on the second range; and those that hatch on the fourth day, on the third

range. Pay no attention to the few that hatch after the fourth day, they are too dilatory to be profitable. The young worms are very easily removed from the hatching table, by laying small mulberry leaves upon them, and when they attach themselves to them, take each leaf by the stem, and lay it on the shelf where you want the worms. Feed the young worms by laying on them a few fresh leaves four or five times a day, or oftener, if they consume them, or the leaves become wilted. During the first age, if the leaves are large, they may be torn, or cut into small pieces; but if you have plenty of leaves, it is not necessary. After they have moulted the first time, lay on leaves, and when the worms become attached to them, lift them by the stems and lay them on a clean place on the shelf, allowing rhem about three times as much space as they occupied before. You may then clear off the shelf previously occupied by them. The same operation may be performed after the second, third and fourth moultings, extending the space they occupy each time, as in the first, and clearing off the litter in the same way.

In feeding the worms, from the beginning to the end, it is of importance that they be fed often and in small quantities. If you lay on too much food, a considerable portion will be wasted; but that is the least consideration—the shelves will become loaded with rubbish, which will render it necessary to clear them often. We have always found it to be a good plan to keep the attendant continually feeding—always passing along the shelves with a basket of leaves, and whenever any of the worms are found without food, or nearly so, lay on a few leaves, and thus keeping them continually eating fresh leaves. We know it is the practice, almost universally, to feed at stated times—three times a day, or four, or five, and to weigh the leaves, giving at each feeding a certain quantity; but all our experience goes to prove its impropriety. Late at night a full supply of leaves, according to their age, ought to be given them, that they may have plenty during the night. Strange as it may appear, many persons suppose the worms do not eat much at night; the truth is, they eat rather more at night than in the day-time, as do all caterpillars; and they ought either to be fed occasionally during the night or have a supply given them over night sufficient to last them till morning.

Wet leaves should not be given to silk worms, nor those having sand or dirt on them. If it cannot be avoided during long rains, necessity of course will compel the feeding with wet leaves; and generally, this may do no harm; but I have seen very large quantities of worms destroyed by it. It should always be avoided, if possible.

The moulting of the worms will occur four times, but unless closely observed, and the several days' hatchings have not heen kept carefully separate, these changes will be scarcely noticed. The times of moulting vary, according to the treatment the worms receive. If fully fed, and a proper temperature be kept in the room, they will moult about every 5 or 6 days; if a contrary practice be pursued, they may do so every 7, 8, or 9 days. If each day's hatching have been kept by themselves, and they have all been properly fed, all the worms of one hatching will generally moult about the same time, and they should not be fed while they are in the moulting state. They generally remain in this state from 18 to 36 hours. As soon as they revive they should be fed, as above directed, with large leaves, or even branches, and as soon as they attach themselves to the leaves, they should be removed to a clean shelf. It is frequently

the case that only a part of them moult one day, and the balance the next. In this care, the two moultings should be carried to separate shelves, and thus be kept separate in future, as they will otherwise not spin cocoons regularly. As the space occupied by the worms must necessarily be extended as the worms grow, the most convenient time for doing it is after each moulting. And if this be properly done, all the worms on each shelf can be made to spin at the same time, and thus save the attendant much inconvenience. To effect it, all that is necessary, is to separate the several days' hatchings, and at each moulting to collect all that revive at one time, and place them by themselves. Those who observe this precaution will be well paid for their attention.

After the fourth moulting, if you have plenty of trees, and do not care about the waste of cuttings, you may cut off small branches with the leaves on, and lay them on the shelves. In feeding in this way, you can save much time, the leaves keep from wilting longer, and more worms can be accommodated on the same space. The branches should be laid first across the shelf, say six inches apart; at the next feeding they would be laid lengthwise of the shelf; and the next, crosswise again, and so on alternately crosswise and lengthwise at each feeding, so that the pile may form a mass of crib-work, affording a free passage for the air, and accommodation for the worms, into which they will descend, to form cocoons. The objections to this plan are, that in damp weather the mass of rubbish and dung of the worms, is apt to ferment, and thus produce disease; and also the loose tow of the cocoons is lost, as it becomes so filled with dirt and fragments of leaves, that it is not worth saving. It is believed, however, that the value of this tow is less than the trouble of the ordinary fixtures for the worms to spin on is worth. The writer of these remarks, raised his silk worms one season on this plan, and the cocoons produced were equal to any he ever raised. Care should be observed in feeding in this way, not to lay on so many branches as to raise the pile too high; as, if it approach near the bottom of the shelf above, before the worms are ready to spin, it will be very inconvenient to feed them. Not more than four or five courses of branches should be laid on each day, and the intermediate feedings should be with clear leaves, so that the pile may ascend not more than an inch and a half each day, and that the height of the pile on the shelf, when the worms begin to spin, may be about nine or ten inches. If, however, the pile should get too high, or if it gets damp and mouldy, the lower part can be easily removed by passing a couple of smooth sticks through the pile two or three layers below the worms; and by means of these, gently raise the upper layers with the worms on, and remove all below. We found no difficulty in cleaning our shelves in this way.

During the whole time the worms are feeding, attention should be paid to cleanliness—that is, the room should be kept free from filth and bad smell. In very hot weather, the windows should be opened to give free air; and in cold damp weather, if it can be done, fire should be kept in the fire-place. It is proper to observe, that unless the weather be very cold, no other injury will be done the worms than stopping their feeding and growth during its continuance. We have had weather so cold, as to produce thin ice in our cocoonery, without other injury to the worms, than stopping their growth a few days; that is, it required two or three days longer to produce the cocoons than it would have done, had not the cold weather occurred. Therefore, though it is always better to keep

the room moderately warm, by fire, if necessary, yet it is not indispensable to very fair success.

If disease occur in the worms, particularly the yellows, the best way is, to take the sick worms from the shelves, and throw them away as soon as they are discovered. The yellows, is both a contagious and hereditary disease; and hence, if one worm is attacked by it, it will be sure to be communicated to the others; and worse than this, even if the sick worms get well, which they seldom do, the eggs they produce are almost certain to produce sickly worms, and by this means, the crop of the succeeding year will be lost.

When it can be done, one or two days' supply of leaves should be gathered ahead, and kept in a cellar, that no damage may be sustained during rainy weather. But great caution should be observed not to feed with *wilted* leaves. It were better to give the worms wet leaves than wilted ones. If kept in a cellar and occasionally shook about, the leaves will keep three days in good condition. Where no cellar is at hand, and where you have plenty of trees, you can keep leaves fresh three or four days, by cutting off the tops and branches of the trees, and setting the butt ends in water. If the end of a branch be set in water one inch deep, it will keep the leaves fresh. For this purpose, tubs might be used, and large quantities of leaves kept in this way.

The sun should never be allowed to shine on the worms; and if any of them are exposed to it, the window should be so shaded by shutters or blinds as to prevent it.

Successive crops may be fed, if it be desired to occupy the whole season, by keeping the eggs in an ice-house, and bringing out portions of them at each time of hatching. It is believed that this is a much better plan than commencing with the whole at once. All new beginners should commence in the spring, with one-half an ounce of eggs, to be hatched as soon as the leaves put out. From the cocoons formed by this crop, eggs for next year's use should be saved, and reelers should be taught. The very best cocoons should be selected to produce eggs. A ready calculation of the number required, can be made by dividing the number of eggs you want next year by 150. Thus, if you want 100,000 eggs next year, divide 100,000 by 150, and the result will be 667 cocoons required for eggs. Let these not only be the best cocoons, but be certain that they were the product of healthy worms. Attention to this, is one of the most important requirements of the art of silk making. And it is a matter of much regret, that it is not sufficiently attended to. Those who make a business of selling eggs, are too much in the habit of selecting their best cocoons for making sewing silk, and leave the rubbish cocoons, and those formed by sickly worms, merely for producing eggs *to sell*, not to use themselves, for they know the value of them too well. Hence, in purchasing eggs, the utmost caution should be observed in obtaining assurance of their quality. The balance of the cocoons of the first crop, may be used in teaching the reeler to reel.

Many persons, of course, have no ice-house in which to keep the eggs for successive crops. A very good substitute may be obtained in the use of a well.

A deep cold well will preserve the eggs from hatching, as well as an ice-house, if they are placed in it at the proper time. If access to the well be convenient, the best way is, to descend to near the surface of the water, take out a few brick or stone from the wall, so as to make a place

large enough to contain the box containing the eggs, and place it there. If there be a pump in the well, the box will remain there securely. If not, of course, caution must be observed in drawing water, not to allow the bucket to interfere with the box; and the place prepared for it should be on that side of the well least exposed to the dripping in drawing up water. It is also said that a deep hole, say ten feet deep, dug in the ground in some shady place, the box of eggs placed at the bottom, and the top covered with plank, has preserved eggs in excellent condition. I have never tried this; but if the temperature in such a place be at or below 55° it will answer the purpose; the coldness of the place, no matter what place it may be, is all that is required. But as we have so often remarked, the eggs must be put in the cold place before the germ has commenced; if not, even the coldest ice-house will not prevent their hatching at or about the regular time in spring. The eggs ought to be put in the cold place during the winter, before they have been exposed to warm weather. If thus preserved, portions of them may be hatched at any time during the summer, and thus, successive crops may be raised. The advantages of successive crops are these. A room that will only contain 48,000 worms at one time, can be made to accommodate that number SEVEN times during the summer, by hatching a crop every three weeks, and keeping the young worms by themselves till the old ones spin their cocoons, and thus 336,000 may be raised during the summer. One person can attend to them, except occasionally, in clearing the shelves, when more help for an hour or two will be required. The person thus employed steadily through the season, will become better acquainted with the business, than could be the case if only one crop was raised.

As soon as the worms have formed their cocoons, that is, *four days* after they began to spin, the cocoons should be gathered, and the loose tow and filth stripped off as they are taken from the branches. The cocoons may then be reeled, or must be cured. The process of reeling has been fully described in this Journal, and need not be repeated here, as also has the process of curing the cocoons. Once more, however, let us urge upon all persons the propriety of reeling their own cocoons. They will obtain several important advantages by it. They reduce the bulk of their product from a very large to a very small compass—no small object to those who reside at a distance from market. They also obtain the profit of reeling, which is nearly or quite equal to that of producing the cocoons. Let no one for a moment indulge the idea that they cannot learn to reel silk. Any intelligent person can learn in a week or two, to perform the operation, and in one season, become sufficiently skilled, to produce the finest and best quality of raw silk. All who make the experiment of feeding worms, should appoint some active, intelligent young woman to reel, and the first cocoons made in the season, should be appropriated to her education as a reeler. She will become sufficiently expert with the cocoons of the first crop, to teach others with those of the second; and thus they will be able to reel the whole, nearly as fast as they are produced. This can be done, and should be done. Foreigners, we know, make a great noise about the difficulty of reeling; but we also know, that hundreds of American females have learned to reel in a few weeks, and produced silk equal to any ever produced in Piedmont. Indeed, we know of aged persons who have even *made the reel*, and learned to use it

perfectly, from the directions given in this Journal. Their only surprise was, after a fair trial, that any one should ever have invested the art with any difficulty. The extreme fineness of the fibre, to an inexperienced eye, seems to be beyond the reach of the sense of touch; and its apparent delicacy to the same observer, would seem to be incapable of withstanding the rapid winding off required in reeling. The fibre is so fine, that it can scarcely be seen, and so delicate, that it would be supposed to break at the slightest touch. Hence, every body on a first view, supposes the art of reeling so very difficult. And yet, all these difficulties vanish at the first fair trial; and all that is really necessary for a beginner, is RESOLUTION TO BEGIN—let her take resolution to say "I WILL," and she SHALL be a reeler. Reeling silk is much more appropriate to females than to males. The very delicacy of the fibre, and the lightness of the operation, indicate that the more delicate fingers of females should perform the operation. Let every experimenter in raising worms therefore, also try the experiment of reeling, and in this way, will reelers be created all over the country, and thus will a market for cocoons be established in every part of the United States.

The writer of this paper has already extended it to a greater length than he intended, or perhaps, is advisable for the object. But he desired to say all that need be said on the subject, that the inexperienced reader, for whose use it is exclusively intended, might be able to try an experiment with all the advantage possible. Hence, many small things have been spoken of—trifles light as air to the practised eye—but none the less important to a successful experiment. As before remarked, this paper is intended for small domestic practise, not for large systematic cocooneries. The latter will undoubtedly build and fit up cocooneries expressly for the purpose; and for such, we have already published full and detailed directions. *Journal of the American Silk Society.*

AGRICULTURAL GEOLOGY.

GEOLOGICAL ORIGIN, DISTRIBUTION, CHEMICAL COMPOSITION AND CAPABILITIES OF SOILS. Considering the vital importance of a correct knowledge of the science and art of agriculture, upon which man depends for his daily bread, we shall willingly avail ourselves of any information that may throw light upon the principles by which we are to be guided in practical operations.

It cannot be concealed, that agriculture in this country is far below the standard attained in Europe, and that by their more scientific methods, the French, German and Italian farmers, are enabled to raise larger crops, so as to supply us with many articles of agricultural produce, at a lower rate than we have been able to grow them upon our own soils, and this too has been effected by people whose soils cost vastly more than ours.

It is well known that for several years past, large quantities of wheat, barley, indian corn and beans, have been imported into this country from France, Germany, Venitian Lombardy, Tuscany and Egypt, while at

the same time, orders have been sent out from France for the purchase of our refuse bones, and the bone black of our sugar refineries—substances used in that country for improving the soils. Thus, strange as it may seem, the French farmers send out to this country for manure, and supply us with bread, while many remain ignorant of the value of those very substances so eagerly sought for by our foreign brethren!

European science has been brought to bear upon the art of agriculture, and hence the improvements are rapidly progressing there; while we have as yet done but little towards the development of this most important of arts.

I know that many intelligent farmers decry "book farming" as useless, and their remarks are certainly worthy of our attention, and we may perhaps remove their objections. Good books on this subject record the experience of many excellent practical farmers, and concentrate all the information that is scattered in various parts of the world; while at the same time they give general rules by which we are to be guided in practice. Where then is the objection that has been raised against such knowledge?

It will be found, that there are few such books in existence, although there are materials enough on record to furnish a good treatise, and those books that have appeared are deficient in some of the most essential particulars, or they are so technical that those who are unacquainted with the elements of science cannot understand them. There are also imperfections in the certificates and rules, owing to no analysis having been made of the soils in question.

So also our farmers are unacquainted with the composition of their own soils. Hence we account for the uncertainty of the results obtained by those who make trials of new methods in farming, and we ought not to be surprised at their frequent failures.

If, however, all the conditions of the problem were understood by both parties, farmers would readily join hands with their scientific colaborers, and the art of agriculture would soon become as certain as any other art, while, by the application of scientific principles, the business would become of a more exalted character, and assume its true rank in the consideration of all men.

In order to make rational experiments in farming, it is essential that the composition of the soil should be known, and then we can act understandingly in our operations. In order to amend a soil, that knowledge is absolutely necessary, otherwise we might destroy its fertility, by the processes intended for its amelioration, and thus be subjected to disappointment and chagrin.

Mineralogy, geology and chemistry come to our aid, and serve to indicate the nature of various soils, while sure indications are readily discoverable for the amendment of those which are sterile.

Agriculture is of so great importance to the community, that we should not allow our knowledge of it to rest upon mere empyricism. It ought to be exalted to the rank of a true science, and then it will become one of the most honorable, as it is one of the most useful of arts, and even the most highly educated men will then be proud to rank as scientific farmers.

Let us now examine the subject more in details, and ascertain how much light we may obtain from the science of geology, that may serve to guide us in our researches.

We have first to consider the geological origin of soils.

Every attentive person must have observed, that solid rocks, exposed to the combined action of air, water, and different degrees of temperature, undergo decomposition and disintegration, so that they crumble into powder, and that some rocks decay more rapidly than others, owing to their structure, or mineralogical composition. If a rock is porous, or stratified in its structure, water infiltrates into it, and on freezing, expands with such power, as to tear the surface of the rock to pieces, so that it readily crumbles. When fire runs through the forests, it heats the surface of the rocks, and by the irregular expansion produced, they are shivered into fragments.

The action of running water and friction of stones, also serve to grind the rocks into powder, by attrition of their surfaces, and the detritus is borne along by the streams, and deposited in low lands, or along their borders.

When a rock contains iron pyrites, or sulphuret of iron, that mineral, by the action of air and water, decomposes, and forms copperas, or sulphate of iron, and the sulphuric acid of that substance acts powerfully on some of the ingredients of the rock, and causes its rapid decomposition. Any person, who has been on Iron Mine Hill, in Gardiner, will fully understand how rapid is this operation, and may there see its results. The oxidizing power of the atmosphere, also, acts powerfully upon the surface of those rocks, which have for one of their components, the prot-oxides of the metals, iron and manganese, and as those oxides take up another portion of oxygen, they increase in bulk, become brown or black, and the stone falls into fragments.

These are a few of the causes now in action, which modify the solid crust of the globe, and it appears that their effects are far more important, than we might at first imagne. Whoever looks upon the muddy waters of the Mississippi, Ganges, Po, the Rhine, and the Rhone, or reads the calculations respecting the enormous quantity of matter brought down from the mountains by those rivers, will at once appreciate the modifying influence of those causes which are continually wearing down the solid matter that forms the mass of our mountains.

Geology teaches us, that such causes were formerly in more powerful operation, and that the ancient world was, from its infancy, subject to violent catastrophes accompanied by powerful inroads of the sea; oceanic currents and tumultuous waves having for many successive periods rushed over the land, and beaten the loftiest crags of the highest mountains. We should then naturally expect, that the earth would present ample testimony of the action of these powerful causes of disintegration of rocks, and we do observe that a large portion of the loose materials upon the surface, bears proofs of aqueous action and mechanical abrasion. By those ancient convulsions, the detritus of the solid rocks was prepared, and forming the various soils, which we observe, the earth was rendered capable of yielding its rich stores of vegetation, on which a large proportion of the animated creatures depend for their food. From the foundation of the everlasting hills, the CREATOR began to prepare the world for the foundation of his noblest creature, man, and converted a portion of the solid rocks into soils, which were given as the field of human labor, and to the progenitor of our race it was commanded that he should till the soil.

If we take up a handful of earth, and examine it attentively, we shall readily discover such mineral ingredients, as denote the rocks from

which it originated. Thus we discover in a soil numerous spangles of mica, grains of quartz, and white or brown earthy looking particles, which are felspar; besides which, we remark a considerable portion of fine brown powder, which being examined with a microscope is found to be composed of the same minerals, more finely pulverised, and mixed with the brown oxide of iron. It will be at once understood, that such a soil arises from the disintegration and decomposition of granite rocks, and that the oxide of iron was derived from the pyrites, or the protoxide of iron, contained in that rock.

A soil arising from the decomposition of gneiss, possesses similar characters, only the mica is more abundant.

Soils from mica slate are made up of a large proportion of mica, mixed with grains of quartz.

Sienite, and hornblende rock produce a dark brown soil, in which there is but little quartz, and a great deal of felspar, and decomposed hornblende.

Greenstone trap-rocks form, by their decomposition, a brown soil, which contains pieces of the undecomposed rock, but the component minerals in the soil itself, are rarely so distinct as to be discoverable. This soil is a warm kind of loam, soft and spongy, easily compressed into smaller dimensions by the pressure of the hand, but not adhesive like clay. It is peculiarly adapted to the growth of potatoes, and is a luxurant soil for most of our ordinary produce.

Slate rock forms a soil of a blue color, in which numerous undecomposed fragments of the rock may be discovered. When transported by water, it is deposited in the state of tough blue clay.

Limestone forms various colored soils, according to the nature of the impurities it contains. They are generally of a light yellowish brown colour, from admixture of a certain proportion of oxide of iron. This is especially the case with those soils derived from the argillo-ferruginous limestone.

Calcareous soils, if they are rich in carbonate of lime, may be distinguished by their effervescence with acids, and the quantity of this substance may be estimated by the loss of weight which indicates the proportion of carbonic acid, that has been expelled, and since the carbonic acid always occurs in the ratio of nearly 44 per cent. to 56 per cent. of lime, it is easy, by a proportional calculation, to ascertain the quantity of that mineral in the soil.

It more frequently happens, that there is so minute a quantity of carbonate of lime in the soil, as to require a minute chemical analysis for its detection, and few farmers have either leisure or means for such an operation. Examples of such analyses will be presently laid before you.

Talcose slate rocks, when decomposed, form a light brown soil, in which particles of the rock are discoverable, and, on analysis, a considerable quantity of the silicate of magnesia is found, which is one of the chief components of talc.

Red sandstone, on disintegration, forms soils composed almost entirely of grains of quartz, with oxide of iron, and clay, with a few spangles of undecomposed mica.

Gray-wacke, or conglomerate, when disintegrated, produces a light grey soil, full of smooth rounded pebbles, which originate from the undecomposed components of the rock.

Red porphyry is very slow of decomposition, and forms a bright red fine powder, filled with angular fragments of the rock.

I have thus distinguished and described the appearances which characterise those soils that arise immediately from the decay of solid rocks, and various characteristic specimens of each variety may be seen in the cabinet arranged for the use of the State.

From Jackson's Geological Report.

ACCOUNT OF AN AGRICULTURAL EXCURSION INTO ST. JOHN'S, BERKLEY.

BY THE EDITOR.

ALL of the crops grown in the State are cultivated in the Parish of St. John Berkley. The lower part embraces the whole of the Western branch of Cooper River, and the Northern half of the Eastern branch. On these two branches are some of the finest rice plantations in the State. Of their management, we do not propose to treat at present, but confine our remarks to the crops grown in Middle and Upper St. John's. Of these, the most important is *Cotton*. The variety grown here is what is known in commerce as the "Santee," an inferior kind of Sea-Island or Black Seed, which inferiority is in a great measure, if not wholly produced by locality. We say in a great measure, for no one who has witnessed the great improvements made on the Sea-Islands in the staple of their cotton, but must be convinced that a similar improvement could be brought about wherever the same variety of cotton is grown. We do not wish to be misunderstood. We do not believe that the fineness of the staple of the Sea-Island cottons could ever be attained, by cotton grown beyond the influence of the sea atmosphere, but we think that the Santees might, by the judicious selection of seed and application of *appropriate* manures, be grown to as great fineness as the Sea-Island cottons were before the recent great improvements. The reason why we suppose that the Sea-Island cottons can never be successfully rivalled in fineness is, that the peculiar atmosphere in which they are grown, is wanting as soon as we leave the coast, and this cannot, as far as our experience goes, be in any manner supplied. So great an influence was supposed to be exerted by this atmosphere, that plantations in the interior of the islands and on the main, (although bordering on tide-water,) were supposed not capable of producing the finest varieties of cotton. Experiments, however, have been made, and experience now sanctions the opinion, that the finest cottons can be grown on such, by the judicious application of saline manures, the atmosphere not being so materially changed in its transit as to affect the staple.

Prof. Shepard is now engaged in analysing the soils of Edisto Island, at the request of the Agricultural Society of St. John's Colleton. We view this as a most important step taken towards the advancement of our agriculture, and the Society merit the thanks of the community for it, which we hope to see imitated by all of the Agricultural Societies of

the South, especially of this State, and even by individuals. No one with whom we are acquainted, is better able to carry on this nice investigation, than the able Professor, to whom the Agricultural Society of St. John's Colleton have assigned it. The many advantages which would arise from an accurate analysis of our soils, are so obvious, that we scarce feel warranted in alluding to them. We, however, cannot refrain ftom mentioning a few. The first is, that having ascertained the component parts of a fertile soil, and the relative proportions of each ingredient, we can by analysing our own, discover in what it is deficient, or in what it superabounds, and if practicable, apply the remedies which may bring it nearer the standard we aim at. Again, it will enable us to correct and bring into culture, spots, and in some instances acres, which at present are wholly unproductive, when cultivated in particular crops. For instance—it is well known that in many fields, both on the islands and main, there are spots which produce what is called the "Blue cotton," which yields nothing. Other spots are subject to the "rust,"—as soon as these are analyzed, and compared with fertile soils, their excess or deficiency, in any particular ingredient, will at once be detected, and the remedy applied. The analysis, therefore, of the first quality of Sea-Island cotton lands will at once establish a standard, by which all on which are grown the same varieties of cotton can be judged. The same benefits will result from analysing on the soils in which other crops are cultivated. But will the analysis of the soils of Edisto Island benefit our friends of St. John's Berkly, or elsewhere?—much, for they will, by it, become acquainted with the component parts of the best soils for growing Sea-Island cottons in, and by analysing their own, they can at once ascertain the difference, and how near, by admixtures, or application of manures, they can approximate. But to return to the culture of cotton in St. John's Berkly.

The soil of Middle St. Johns is a light loam, while that of Upper St. John's is so light, that it may almost be termed sandy. It is seldom that a field, selected for cotton in this Parish, is cultivated in any other crop. The selection being generally made on account of the supposed adaptation of the soil to this particular plant, or the locality of the field. Small fields are sometimes alternated, but the large, scarce ever. All of the crops, however, (cotton, corn, and potatoes,) are planted in lands 4 feet apart, so that whenever any change is made in the culture of a field, the labor of preparation is not increased, by having to level down and re-form new beds at an altered distance. As soon as the crop has been ginned, preparation is made for planting, and each planter endeavors to have his fields ready by the 25th of March. Most of the planters adopt the plan of placing the manure under the list, or rather they strew it between the rows, and then form a list which of course mixes the manure, cotton stalks, weeds, grasses, and earth (forming the list) well together. A very small bed is made on this, which is gradually increased in width, (but not height,) at each working. Some, however, prefer to make the bed at once of the size intended, and endeavor to keep it thus throughout the season. The hoe in this and the subsequent operations is the principal instrument used. The plough, if used at all, is only employed to break up the alleys. Formerly the "skimmer" was much used, but from some cause which I could not learn, it has been laid aside. From the 20th March to 1st April, the crop is planted. The holes are not made as formerly, by the hoe, but by what is here termed a dibble; made

from a 2½ inch plank, 6 inches wide, and tapered to a half inch, at the bottom, whilst the upper part is formed into a handle. Across this, a groove is cut diagonally, into which a lath or thin piece of board is fixed, which can be readily adjusted to different distances, and is of such length as to touch the ground when the dibble is struck into the bed, and marks the spot where the next hole is to be made. The usual distance is from 20 to 24 inches, and it is supposed that two hours is gained by using the dibble in place of the hoe. The thinning commences at the second working, is continued at the subsequent and completed, by the time the plants are six inches high—one stalk only being left in each hole. Of course each planter endeavors to keep his fields as clear of grass as possible, and hoes as often as he can, which however is seldom more than five times. The crop is usually laid by, from the 20th to the 25th July—but we find that the opinion of some of the best planters, is in favour of laying it by, by the 1st of July, even though it be a little grassy; working it later, they think, increases the growth, and prevents the pods from maturing. In hoeing, some increase the size of their beds gradually, whilst others are careful so to perform this operation that no new surface is exposed, by which they have less grass to contend with, as nearly all within germinating distance, springs up and is destroyed in the first workings. As soon as from 15 to 20 lbs. can be picked, (which is usually by the first week in September,) some hands are sent in: no task is given in picking cotton, though they generally average from 90 to 100 lbs. when the pods are well open. Three of Dr. Ravenel's negroes, last fall, picked in September 136, 140, and 142 lbs. each. The cotton is spread out in the field as it is picked, and the next day on the scaffold. It is then housed until wanted for the gin, when it is passed through the whipper to free it from dirt, and this operation is repeated after it is ginned, to clear it of broken seeds. Some of the planters sort and pick their cotton before it passes through the gin, which renders the labour of moting it much less. Generally, however, nothing is done to the cotton until it has been ginned, which operation is mostly done in this Parish by the foot-gin—on some plantations, in conjunction with Farries' gin, worked by horse power, which is considered the best, yet used, and gets out from 250 to 300 lbs. per diem. The average product in this Parish does not exceed 100 lbs. per acre, except when manured; the average on manured land is supposed to be 150 lbs. Upwards of 250 lbs. have been made on sixty acres.

We have, in the above, given the outline of the culture as practised in this parish, and will now notice a few particulars more in detail. We have stated that no rotation is followed, and one of the strongest reasons assigned, (and one not readily got over) is, that the three principal crops (cotton, corn and potatoes) are cultivated in such unequal quantities, that a rotation with these is out of the question, and no other crops at present offer sufficient inducements. But although no rotation at present can be established, yet the crops grown on some of the small fields are at times alternated. It has been found that cotton and corn can be cultivated, by the aid of manure, for an indefinite period, on the same soil, without diminution of product, yet potatoes cannot, no matter what quantities of manures may be applied. Corn succeeds, as is well known, admirably after potatoes, but for years, it was believed that cotton could not be successfully grown. This, however, was an error which is now happily corrected. It only requires, as Major Porcher has fully ascertained, that the ground be bedded up, very early, (say in January) so

that the beds may consolidate, as the cause of the cotton's dying appears to be connected with the looseness of the soil; the more compact the bed is the better will be the "stand," and the sooner it reaches the hard earth under the bed, the sooner will it grow off. Hence the reason for small beds. This is directly at variance with the practice pursued on the Sea Islands, but of their culture we hope hereafter to give some interesting details, and will not here enter into any comparison.

Many experiments were related to us, going to show that corn and cotton may be grown for years consecutively on the same field, without deterioration or diminution, when proper quantities of manures have been applied. In fact, that old fields have been actually restored to what is supposed to have been their original fertility. Several were mentioned to us, but we do not find the quantities of cotton stated but in three instances, one a field at Mexico, (Major Porcher's) which has been cultivated without rest, since 1801, and seldom planted in any other crop than cotton, yielding the last year 176 lbs. per acre. The other is the field of Mr. Thomas W. Porcher, already alluded to, which produced 170 lbs. per acre. Dr. Ravenel's fields, which have been in the culture of cotton for years, has also materially improved, the average, the last year, being 150 lbs. per acre. The manure most relied on, and the only one in fact, which has been used in any quantities, is the compost, made, as we have already stated, by hauling into the stables, cow, hog and sheep pens, the leaves gathered in the woods, where they remain until spring and are then carted out. Of this, from 250 to 300 bushel basket's full, are considered sufficient for an acre of cotton. Plaster of Paris has been used with decided effect by Mr. H. W. Ravenel and Mr. S. G. Deveaux, but unfortunately the experiments have not been repeated, and were not made with that accuracy which enables us to judge of its relative value. We hope, however, to have the pleasure of giving to our readers some further experiments with Plaster hereafter. Various other manures have been tried; such as swamp mud, fowl dung, cotton seed, &c. We conversed with no one who had experimented with the first, but understood that it was but little used, it not having been generally found beneficial. Perhaps this has been owing to its having been taken fresh from the swamp, and applied to the crop. All the experiments we have ever made with swamp mud. went to prove that it could not be advantageously used unless it had been exposed for some time to the action of the atmosphere, or was corrected by the admixture of lime. We would suggest to our friends of St. John's, (especially the upper part, where the soil is so very light,) whether a most excellent imitation of the marsh mud, which has been found of such immense benefit to the cotton crops of the Sea Islands, could not be made by adding to the mud taken from the swamps, a small quantity of lime or marl and of salt, the latter perhaps in the greatest proportion. We hope that some of the Planters will make some small experiments with a manure thus formed. The benefit, we think, will not be confined to the productiveness, but extend to the quality also. Fowl manure cannot be obtained in any very large quantities, but as *very little* manures a large space, it is also applied to the cotton and with great effect. Cotton seed is chiefly reserved for the corn. When used for cotton, it creates too luxuriant a growth, and the pods are late in opening. Several experiments have been made with lime and salt, but these generall have been so loosely

made, that nothing definite beyond the fact that they were beneficial, could be gathered from them. Mr. Frederick A. Porcher of Somerton, has made greater use of these two manures than any other Planter in St. John's, and has kindly furnished us with an account of his operations with both, and which being interesting, we give in full.

"In 1839, I applied to a small field of Cotton, lime stone in the proportion of sixty-four bushels to the acre. The soil was originally a good loam, of the quality indicated by the growth of oak and hickory. This, I presume, from its contiguity to two large swamps, and from the growth of the forest land in the neighborhood. I do not know when the land was cleared, but it must have been a great many years since. It had obviously been subjected to a long course of exhausting cultivation. When I first took it in, it was covered with the broom grass. A crop of slips, I believe, was the first step taken towards reducing it to cultivation, and this was followed every alternate year, with a crop of cotton. During the alternate years it rested—manure was freely given. The first crop, that of 1835, was almost a total failure—that of 1837, promised better, but it did not yield more than 75 lbs. of clean cotton per acre, Perhaps it shared the fate of other crops on lands of a better reputation, the autumn of 1837 having been peculiarly unfavorable to the maturity of the cotton. The products of the field from the crop of 1839, is, as well as I can judge, a fraction below 150 lbs. per acre.

"The lime used was procured from the margin of a creek on the plantation. It lies about six feet below the surface of the highland. It is of various appearance—some of it being so hard that it is with difficulty broken by the pick axe, while others crumble with the application of very little force. Fossil remains abound throughout the strata, but more in the loose masses than in those more compact and hard. I have reduced all to quick-lime in the kiln, and have found it quite available for mortar.*

"The lime applied to the land was broken with a hammer, a very toilsome operation, and in that way applied. The field is laid off in square half acres, and contains, in each acre, sixty rows, each 150 feet in length. To each of these rows a bushel of the pounded lime was applied on the list. The land was manured as usual. The quantity of manure applied I do not recollect; I am sure it did not exceed sixteen horse cart loads to the acre.

"I left the plantation in May, before the lime had had any time to develope its agency, and did not return until October. In June, my Overseer wrote me that he could not perceive the action of the lime, except perhaps in the increased vigor of the growth of the joint and nut grasses with which the field is infested. Some time in July, he wrote that the limed cotton was improving rapidly, and recommended its application to every acre of cotton which should be planted. The lime did not cover the whole field, the part not limed is of a character more congenial to cotton than the other. The lime gave out in the middle of a pond. In this pond I doubled the quantity, and instead of one bushel, put two, that is, at the rate of a hundred and twenty bushels to the acre. Here the success of the experiment was striking. The pond, as far as the lime went, had a luxuriant growth of productive cotton in it, whilst on the rest a few poor stalks here and there, alone indicated the presence of cultivation. No pains were taken to separate the product of the limed part from the rest.

"The application of wood ashes to a hitherto unproductive pond, in the quantity of a peck to the row, or from fifteen to twenty bushels to the acre, was attended with the same, or even more striking result.

"My brother, in 1836, manured some of his lands with shell lime, bought in Charleston—the quantity applied was a peck to the half acre row, or 19½ bushels to the acre. The land was planted in 1836, 1838, and 1839, in cotton. The first year no effect was observed—an improvement was perceptible in 1838, and markedly so in 1839. The soil was a poor clay loam. The lime

* Prof. Shepard has kindly promised us an analysis of this lime stone.

was slaked when applied. His experiments with ashes in the quantity mentioned above, were all eminently successful.

"Salt was used on my plantation in 1836 and 1837. The first year, its successful result was most strikingly manifest. A field of sixty acres, lying on the edge of Bigen Swamp, had been treated in the following manner: part of it, say 30 acres, was cleared and planted in cotton in 1832; the crop of cotton was continued without intermission every year. In 1834 and 1835, the remaining 30 acres were cleared, and planted with cotton. In 1836, the whole field of sixty acres presented portions which had been one, two, and four years under cultivation. No doubt was entertained of the propriety of planting the two first portions, but it was thought advisable to give the third portion a dressing with manure. Accordingly a quantity of compost was prepared, and about thirty bushels of salt, or a bushel per acre, thrown upon it. This was spread upon the land, and this part, then under cultivation without intermission for five years, yielded a greater quantity per acre than the rest of the field, which was much more fresh. The difference was perceptible to the eye. I sold upwards of one hundred and fifty weight of cotton per acre from this field, at a price higher, than any Santee cotton at that time in Charleston brought, *except cotton raised under the same treatment.* This experiment was made under the direction of my brother, the late Dr. J. P. Porcher, who superintended my plantation during my absence from the State.

"The use of salt was repeated in 1837, but without any marked result. In no case was there such a favorable opportunity of comparison, as in the preceding year. The cotton crop was a bad one. One great use of salt as a manure for cotton, seems to be the quality which it imparts to the plants of holding the the fruit which it bears. I do not know whether it stimulates and promotes production, but it certainly appears to act as a conservative to the product. Such was its only apparent agency in the successful experiment of 1836. My brother continued the use of salt, and the result of his cropping has shown that he did not exaggerate its value."

Mr. Porcher intends making considerable use of both the lime and salt. When we had the pleasure of visiting Somerton last, we found large quantities of the rock, got out for the purpose of being converted into lime, and we understood from him, that he had purchased a considerable quantity of salt to be used as manure. One fact we would call the attention of our Planters to, and that is that the *cotton, manured with salt,* brought a higher price than any other from the same neighborhood, sold at the time. Is it not worthy of enquiry and experiment, whether salt, added to other manures, (or alone) does not produce a finer staple, independent of its effects in other respects? In a small pamphlet, published some few years since by Mr. Johnson, he enumerates the benefits to be derived from the use of salt to be—

"1st. By *promoting* in *small* proportions, putrefaction. 2d. By destroying weeds, grubs, &c. 3d. As a constituent or direct food. 4th. According to Drs. Darwin and Priestly, as a stimulant to the absorbent vessels of plants. 5th. By preventing injury from sudden transitions in the temperature of the atmosphere; and 6th. By keeping the soil moist."

Corn.—There is nothing peculiar in the culture of this crop, unless it be in the great attention bestowed on manuring it. The preparation of the land is similar to that for cotton; the manure, which most generally is compost, is strewed (by some at the rate of 250 bushel baskets full per acre,) in the alleys and a heavy list made, on which the corn is planted, and not on beds, as when planted on beds, the stalks are two easily blown down. Cotton seed is invariably used as a manure for this crop, and is supposed to cause the greatest yield. Many Planters apply it in the hill at the rate of a pint to each.

Others reserve it until all danger of frosts is over, and apply it around the corn, and cover it with the hoe at the first working. By Mr. T. W. Porcher, it is placed at the sides only, which enables him to bury it when it sprouts, much more easily than by the usual mode of crushing with the foot and then covering it. When it is up, he sends ploughs into the field, and a fellow goes ahead of each with a spade and places it close to the corn, and between it and the sprouted cotton seed—the earth thrown by the plough completely covers the latter, while the corn is untouched. In this manner, he accomplishes much more than those who follow the old plan. In working it, most of the Planters make but little use of the plough, and the reason assigned is the fear of spreading the nut grass, which has already become a source of great annoyance. A plan adopted by Messrs. Thos. Porcher, of White Hall, R. W. Ravenel, and perhaps others, is to work only every alternate alley at each time of going over, by which course of culture, the roots of only one side are cut at a time; moreover a fresh stimulus is applied to the plants more frequently, by the stirring of the ground. They speak very favorably of this plan.

The average product of this crop in St. John's, is from 10 to 12 bushels. Dr. Ravenel usually averages about 22 bushels, and this on fields which are perhaps the oldest on his plantation, (itself among the oldest in the Parish.) These were very much reduced when he took possession, but by manuring highly, he has restored them to their present state of fertility. The Baden corn has been cultivated in small quantities by a large number of the Planters, and universally condemned. It is found not to answer in our climate. The product is not much greater than that of our Flint, the grain very inferior, it is very easily blown down, is subject to rot if left until the usual time of harvest in the field, and when gathered in, is more liable to the attacks of the weavils. For these reasons, we believe but little of it will hereafter be planted.

OKRA OR TWIN COTTON.

[Extract of a letter from J. H. Taylor, Esq. to the Editor, dated Montgomery, February 8th, 1840.]

You desire facts with regard to the Okra Cotton. I will avail myself of some leisure moments to contribute my feeble efforts to your journal on this subject. I am satisfied it must superseed all other Cotton on the threadbare lands of Carolina and Georgia. It has many advantages over other Cottons—1st. Its yield, from the gin head, is about 37 lbs. lint from 100 lbs. of seed Cotton, against 29 lbs. lint from 100 lbs. of any other Cotton. 2d. Its tap root is much longer, and thereby bears drought better. 3d. It has less foliage and much shorter limbs, will consequently bear crowding, and of course less nourishment drawn from the fruit. Its staple is about the length of, and much finer than the Petit Gulf Cotton, and by gentlemen engaged in the Cotton trade, is regarded 20 per cent. more valuable.

IMPROVEMENT OF COTTON LANDS BY FLOWING WITH BRACKISH WATER.

CHARLESTON, 19th February, 1840.

Dear Sir,—In compliance with your request, I have taken some pains to possess myself of the facts connected with the experiment of flowing cotton lands with salt or brackish water. They are as follows:—

In 1838, some marsh land which had been nearly worn out by repeated crops of Cotton, was planted in Oats. In the autumn of that year, the stubble was listed in, together with a considerable growth of weeds, which had succeeded the Oats. The list was ploughed over, and kept for a fortnight nearly covered with brackish water. The land was bedded as usual and produced a very fine crop.

I am disposed to attribute the success of the experiment mainly to the flowing, because, though the whole treatment was such as to warrant an expectation of improved production, it was scarcely sufficient to account for a growth equal to that on perfectly new land, which was the case in the present instance. Salt has been used with success for manuring Cotton, and I see no reason why a moderate flow of salt water should not have the same effect.

Yours, with respect,

A CORRESPONDENT.

DEEP PLANTING.

A patron of ours informed us a few weeks since, that while taking his fodder, he discovered a great difference in appearance between two pieces of corn, which were planted at the same time, and in the same kind of soil. The fodder on one piece of ground dried up so fast that he could scarcely get through with stripping it before it was entirely burnt up, to use the common phrase. On going to the other piece, he found it green to the ground, and in good plight for stripping. He was struck with the difference in the two lots of corn, and on reflection recollected that on getting ready to plant his corn in the spring, he ran a furrow with a large shovel or barshare plough, after which he followed with a small plough called a bull tongue, running it pretty deep in the same furrow, till he got perhaps half over the piece, when he concluded to plant the balance in the single furrow, and discontinued the use of the bull tongue. The result was, that the part planted deep in the opening made by the small plough, where the larger one had previously been run, produced a third more fodder, and of a better quality than that planted in the shallow mark made by the large plough alone; besides the great difference there must be in the weight of the corn, the latter drying up too fast of course to make a proper article for bread. This should be remembered by farmers, and the evil of shallow planting avoided, especially since all seem to think the seasons are becoming shorter, and much drier than formerly.

Southern Cultivator.

MATERIALS FOR MANURE.

It seems almost a work of supererogation to call the attention of farmers to a subject which we have so often and strongly urged upon them, as that of increasing their manure heap by the collection of every material to which they can have access. But we shall continue to do it on every occasion when we are likely to get a hearing. A continual dropping will wear away a stone: and possibly we may make an impression at last upon some minds that are perhaps a little softer than granite.

Until the snow comes and the frost completely locks up the ground, materials may be found in all directions and on every farm, which will amply repay the labor of collection; and labor at this season can be more easily obtained than in many other cases. We are continually struck with this fact in our tours through the country; and do not admit that our farmers ought to be satisfied until they are as frugal and saving and parsimonious as the Chinese.

By way of illustration we will try to recollect a few things which met our observation recently, we shall not say where, on what road or in what neighborhood, lest we might sour the milk of some of our good friends.

We passed in the first place a grove or forest with the ground covered with fallen leaves and rotten wood. Why might not these have been collected and being deposited under cover, furnish a fine mass of excellent litter for the cow and the horse stables, and the sheep-yards through the winter, from which after being surcharged with the liquids from the barn, they may be applied to the cultivated lands with no small advantage? These woods were at the border of an extensive pasture, covered with brakes, and sweet fern and bushes; why should not all these be cut down and conveyed to the manure yard, where they would soon decay and go into the general receptacle. At one corner of the pasture there we found a bog hole full of deep black mud, and the borders of which had been enriched for a long time by the droppings of the cattle who had been accustomed to resort there for water. Here, said we to ourselves, at once is an abundant resource, a mine of wealth which cannot be exhausted for years, but which the farmer had hardly dreamt of. As we returned to the road we passed the remains of the carcase of a dead horse and the bones of two or three sheep which had died of neglect and starvation the preceding winter. There they lay bleached by the rains and winds. Why should they not now be collected, broken by a sledge hammer, and used upon the land: or rather why should they not at first, immediately after death, have been covered so as to avoid poisoning the air with their offensive odors; and so that ammoniacal gases might have been collected in the soil, and thus be saved for the aid of vegetation; and indeed, so that the whole mass might be reduced to a condition, in which it would furnish a most enriching manure. In its present condition it was worth nothing. Near the bars at the road side, there was the site of an old house, with the cellar walls remaining, part of the chimney standing, and piles of rubbish, mortar, burnt clay, ashes, chips, and innumerable unmentionables, the undisturbed accumulations of years, the growth of thistles, and hemlock and thorn apple, and barn grass upon which, demonstrated the richness which was underneath. Why was all this neglected; and why was this monument of slovenli-

ness and sluggardliness suffered to remain there year after year, an offence to every decent traveller and an inexcusable disgrace to its owner, who was probably too much in a hurry to get to the shop or the tavern when he went from home, to find time to remove it; and when he returned was not generally in a condition to see whether it was there or not.

We had not gone far, when we met the whole troop of bristled and long-snouted quadrupeds of this capital farmer in full chase in the road, running almost as violently as a herd of old; mother, grandpapa, and as many young ones as stood round the stake of the great English martyr at Smithfield. Here they were, lean and ravenous as wolves. As for thought of yarding them, littering them, and making each of them pay regularly for his board by the manure which he would make and compound;—this was a sort of 'book farming,' which this skilful gentleman utterly disdained. As we came near the house, here was a pile of chips, which had never been turned over though thoroughly rotten at bottom, and though at least ten loads of fine manure might have been taken from under them. The front yard too was ornamented with the droppings of the cows, who were accustomed to come almost into the entry of the house to be milked and to lay in the road at night, because it was rather too much trouble to yard them at the barn, as the bars had not only to be taken down but put up again twice a day. In passing round the corner of the house we came near going over shoes in the drainings of the sink, which was pouring out of the house by a short spout directly under the end window, and there they furnished a perfume without charge, excepting now and then a gentle touch of typhus fever, to the inmates; no doubt to those to whom use had rendered them familiar, quite as agreeable as a cologne bottle. Here too in unmeasured profusion lay bones and rags and old hats and chippings of leather and woollen rags and feathers, furnishing a perfect regale to the eye by a sort of charming Mosaic variety. We are not willing, however, to quit the premises of this capital farmer without mentioning an admirable contrivance for cleanliness, for which we should advise him at once to secure a patent right, if it were at all an original invention. He had a pig-stye, in which he in the autumn shut up his swine to be fatted after his fashion; and a *necessary*, which for picturesque effect no doubt, was formed with open boards put in like the slats of a verandah, and for modesty's sake had a door, which was never confined by hinges but was made to be placed and replaced by lifting, and secured in the inside by a billet of wood of the size of a city back-log, and the place appeared to be frequented by persons resembling Hogarth's Scotchman, who, poor fellow, supposed the holes were made to put his legs down; but the perfection of the whole arrangement consisted in having both these places fixed directly over a running stream of water, where all impurity was at once carried off and the most delicate nerves could not be offended.

Now such is a picture of the carefulness, economy and good management in respect to the saving and accumulation of materials for enriching their land, we had almost said of one half the farmers of Massachusetts. We will not, however, undertake to determine the proportion; but only say, let those whom the coat fits put it on. H. C.

From the New-England Farmer.

BREAKING A COLT.

Some good people who raise colts are not aware that they are thinking animals and have feelings, passions and affections, very much like human beings. They cannot talk—that's all. People who do not appreciate the character of horses, are apt to treat them like brutes, without love or mercy, and without any appeal to their glorious intelligence. "The horse knoweth his owner;"—and he knows much more,—he knows when he is treated as a Christian's horse should be—and in respect of treatment the Turk and Arab have much the advantage of us in civilization. Those pagans make friends of their horses—they love each other, and in the sandy desert or the wide plain they lie down side by side and each is equally ready to resist the approach of an enemy.

It is not often so with us. The Colt is left to grow up to manhood wild in the pasture, with very little acquaintance or sociability with his master. As soon as he is thought strong enough to work, he has a saddle or a harness slapped upon him, so hard as to make him tingle again. He is put into some strong cart or wagon without understanding what is wanted, and being bewildered in his ignorance, and exasperated at such rough handling, it is generally the case that he exerts his strength to get out of the scrape and avoid his enemies, by plunging, kicking, throwing himself down and sundry other such *vile tricks*, (as they are called) as would naturally occur to a poor beast who thought himself most vilianously abused. While this is the operation in the mind of the unsophisticated colt, the *horse-breaker* is swearing at his vicious obstinacy, laying on the licks with the string or the butt of the whip handle, and doing his best to draw blood at every stroke. His intention is to subdue the beast to obedience. He may succeed, but it will only be by destroying his noble spirit, and rendering him a tame, passive beast of burthen, working only as he is forced, but without ambition or good will. The man is the most ignorant brute of the two. He is destitute of all proper knowledge of the animal who "knoweth his owner," and should be beaten with many stripes himself.

The fact is, the colt should be treated with unvarying kindness, except when he is manifestly vicious, contrary to his own knowledge, after having been fairly taught. When he is taken up for breaking he should be kept hungry and be fed from the hand of his master; while all the little tokens of praise, fondness and approbation, which are as gratifying to a horse as to a woman, should be liberally bestowed upon him. No act of rudeness or unkindness should inspire him with fear;—and in a short time he will come to his master as to his best friend. Let him feel that he is safe in the hands and care of man, and he will place confidence in that attention which is bestowed, and with a light heart will exert himself to please his rider. Bestow upon him the whip, and jerk him about with the halter and bridle, and his temper will rouse to resistance, or sink to stupidity.

A horse may be taught, like a child, by those who have won his affections; but the method of teaching is by showing distinctly what you want him to do, not by beating him because he does not understand and perform at the outset. Judicious management is required in the course of instruction, for these creatures, like men, have very different intellectual capacities and tempers; but all may be mastered by kindness, while

the best, the most high-spirited, the most generous, will be ruined by beating.

To illustrate this which we mean to enlarge upon hereafter, we will relate a little circumstance that occurred during a tour to the White Hills. Having a horse—a fine light gray saddle poney, we undertook, with a friend, to ride to the summit of one of the mountains. *Federal*—that was his name—and he belonged to Niles—would have done anything for me, and he and I had become well acquainted, and he was a most noble-hearted fellow. Federal clambered up according to any directions. I thought I could see the best way, and guided him accordingly. We got at last upon the peak, where was a level of some yards square, and Federal who never had been up so high in the world before, as we slacked the rein, turned three times round to look at the prospect, and then set up a scream of delight. It was not a neigh nor a whinner, nor any common mode of talking for a horse, but it was a regular hurrah, as much as to say "O! thunder and lightning! Aint this glorious?"

After a while we turned to descend, and I gave Federal his own way. It seemed at times rather a ticklish job; but he managed it well. The little rascal stopped now and then and made a survey as carefully as could be done by a civil engineer. He turned and tacked, and worked ship, like an old sailor among the breakers; and being careful and sure-footed, he came down as safe as a tortoise. But we brought up at last against a fence—having taken a different direction from that by which we ascended. We rode at the fence fairly, but Federal stopped short. "You fool," said I, can't you jump?" Tried it again—no go. I stopped a moment, and thinks I to myself this horse has never leaped a fence in his life. I felt sure he would have tried his best for me at any time, and would have broken his neck sooner than have refused—if he had known exactly what to do. I talked kindly to him—coaxed him—patted his neck—and as soon as I saw his head raised about two or three inches, and his ears pricked up brightly, and felt the muscles of his sides swell under the saddle, I knew he had caught the idea—that was all he wanted—I gave him the hint to try it, and over he went, like a swallow, at least two feet higher than was necessary. The little scamp meant to make a sure job of it. He was no sooner down, than he wheeled about, looked at the fence and snorted, as much as to say, "what do you think of that?" and trotted off. Ever afterwards during our journey, Federal was on the look out for some excuse for leaping. A log, a run of water across the road, even a stone bridge, he uniformly pricked up his ears at and leaped across—giving a snort each time to announce his joy at having performed a new feat.

The moral of the matter has been stated at the outset. Federal only needed to understand what we wanted, to do all in his power for its accomplishment. He was *only a hired horse*, but we understood and loved each other. He was little, but high-spirited, noble, generous—no whipping on earth would have managed that horse so readily as kindness and encouragement. Pulling, jerking, whipping and spurring, might have been tried in vain to make him leap the fence—with a moment to think about it, and a nice dose of flattering applause, he flew over it like an experienced hunter. More about this hereafter.

Boston Times.

EGG-HATCHING EXHIBITION.

[CONTINUED FROM PAGE 22.]

THE position of the chicken in the shell is such as to occupy the least possible space. The head, which is large and heavy in proportion to the rest of the body, is placed in front of the belly with its beak under the right wing; the feet are gathered up like a bird trussed for the spit; yet in this singular manner, and apparent uncomfortable position, it is by no means cramped or confined, but performs all the necessary motions and efforts required for its liberation, with the most perfect ease and that consummate skill which instinct renders almost infallible. The chicken, at the time it breaks the shell, is heavier than the whole egg was at first."

The superintendant of the oven politely exhibited a compartment in which the eggs were chipping. Some had chipped the day before, others that day, and some would not be chipped till the morrow; in a few cases we observed the beak of the chick boring its way through the shell, and getting itself emancipated. When the little creatures are ushered into the world, they are not immediately removed out of the oven, but are allowed to remain for a few hours until they become dry; they are then removed and put into the glass-case, on the table at the end of the room. This case is very shallow, and the glass-cover can be easily pushed aside to permit the superintendent handling them if required. They are here for the first time fed, though not for twenty-four hours after being hatched; the material scattered among them is small bruised grits, or particles little larger than meal; these they eagerly pick up without any teaching, their instinctive desire for food being a sufficient monitor. After the brood has been kept in the glass-case, (which is partially open) for two or three days, and been thus gradually accustomed to the atmosphere, they are removed to one of the divisions in the railed enclosure on the floor. Here hundreds are seen running about, uttering peepy cries, picking up grits or otherwise amusing themselves, all being apparently in as lively and thriving a condition as if trotting about in a barn yard. At six in the evening they are put to bed for the night in a coop; these coops are wooden boxes, lined with a flannel curtain in front, to seclude and keep the inmates as warm and comfortable as if under the wing of a mother. At six or seven in the morning, they are again allowed to come forth into their court-yard, which being strewed with sand, and provided with food and water, affords them all the advantage of a run in an open ground.

I made some inquiries respecting the failures in hatching, and deaths, and received the following information:—The eggs are usually purchased from Leadenhall market, and, consequently, not being altogether fresh, or otherwise suitable, one half of them fail in hatching. Once hatched, they are safe, for not more than one dies out of fifty which are brought into existence. If good and suitable eggs could be procured at all seasons, the failures in hatching would be comparatively trifling. Bad eggs therefore, are the weak point in the establishment, and I should recommend the proprietor to complete his arrangements, by adding an egg-laying department to those which he has for hatching. This might be done by keeping a regular poultry-yard, either in connexion with the place or in the country. The apparatus for hatching is capable of producing forty thousand chickens in a year, and, making allowance for failures, the actual product cannot fall short of half of that number.

When three weeks old, as I was informed, the chickens are taken to market, and sold for a shilling each. Thus, we would suppose, the Eccaleobion turns out at least a thousand pounds worth of chickens annually—no bad revenue, it will be said, after paying expenses, but not greater than the ingenious contriver and proprietor, Mr. William Bucknell deserves.

This thing, trifling as it may appear to some, is highly deserving of public attention. Attempts to hatch eggs in ovens are of old date, but have never succeeded on a permanent or large scale in this country. In Egypt the practice has been more successful; yet even there, with the advantages of a superior climate, one in five of the hatched birds dies, and many are deformed, doubtless from the unequal application of the heat. It has only been by the Eccaleobion, as far as I can learn, that the birds have been brought out with certainty, or been reared successfully after being hatched: every bird is perfect, and will grow to its full size. The distinguished characteristic of this invention is exact regulation of temperature at different stages of advancement, for eggs, as is well known, develope heat naturally in the course of hatching, and consequently the artificial heat requires to be judiciously diminished as the natural heat increases. By employing steam or hot-water pipes, the temperature is not only capable of being exactly regulated, but is diffused generally and equably throughout the oven, and acts upon all sides of the egg alike. Hence, the eggs in the Eccaleobion require no handling or turning during the process—there is no fear of their being roasted on one side or cooled on the other. Provided all is fair and above board, as the proprietor of the Eccaleobion describes, or the superintendants inform the visitors, there can be no difficulty in multiplying egg-hatching and chicken-rearing establishments all over the country. Poultry is at present a dear article, on account of the very limited and imperfect manner of its production; but this need not be the case any longer. There is nothing to prevent every town in the kingdom having its chicken manufactory as well as any other branch of business. Wherever there are establishments with steam-engines having a redundancy of steam, it would be the easiest thing in the world to erect a fowl producing apparatus in connection with the works. And if this did not in some degree improve the resources of the country, and the condition of the people, I do not know what would.

Chambers' Journal.

CULTURE OF THE DAHLIA.

[CONTINUED FROM PAGE 30.]

Among the various ways of propigating the Dahlia, we forgot to mention that of *grafting* into the tubers. This mode can be advantageously resorted to whenever the cuttings are weakly, and especially if they be of very choice varieties, for it is more certain, and plants thus treated are sooner ready for planting out than those raised from cuttings.

When cuttings can be obtained from the variety intended, take dry tubers of any of the inferior sorts, split them from the top about two

inches downwards; then cut the scion to a wedge shape, insert and bind it well with matting, after which it may be treated as is already detailed for cuttings. We have however, after grafting, planted them at once out, into the garden where they grew as well as the rest.

Planting Out.—This must depend, in some measure, upon the taste of the individual, and the object he has in view. If it be to obtain an "uninterrupted display of flowers," the directions given by Mr. Sabine will enable him best to attain this. "Georginas (Dahlias) look best in large masses unmixed with other plants. In this plan of growing them, some nicety is required in the due distribution of the sorts, so as to have a proper and good admixture of colors, and particular care is taken to keep the tallest growing sorts either in the centre, or at the back of the clump, according as it is destined to be viewed, from one side only or all sides: and to place the whole, so that there shall not be any unevenness in the general shape of the entire mass, arising from the irregular arrangement of individual plants, according to their respective heights. The roots should be planted three feet from each other every way. This distance will keep each sufficiently distinct, and yet so united that the whole clump will have the appearance of an unbroken wood or forest of Georginas."

Dahlias planted on either side of a walk, have a very pretty effect. They may be, at such distances as to show singly or nearer together so as to produce a continuous line or avenue. They may also be trained *en espalier*, to which we will refer again. The ground being prepared, the planting out of the old roots is quite simple, and has already been given. The plants raised from cuttings require a little more care. If they have been brought forward in hot beds, care must be taken to inure them to the atmosphere, nor should the operation be performed too early in the season, for independent of the danger from frosts, the earth would be too cold, and they would receive a check which might prove fatal. The manual operation is the same as with all other plants which are transplanted out. The holes should be made large, and the plants turned out of the pot and placed in the hole with the ball of earth entire, then fill around with soil made fine; give a little water, and shade from the sun for several days.

Training.—At the time the plants (or old roots) are set out, a strong stake of the height to which the plant will attain, should be driven in to the ground near to it, and sufficiently deep, (say eighteen or twenty inches,) to keep it steady. This is best done at the time of planting out, as there is less risk of injuring the roots; should it not be done then, by no means let it be neglected long after the shoots appear above ground. As they advance in growth, tie them neatly to the stakes, allowiug sufficient room for the increase in the size of the stock. They should, notwithstanding, be looked over occasionally, and the bandage loosened when necessary. Only one shoot should be allowed to grow from each root, and from this all of the lateral branches for three or four feet in the tall growing varieties, and from twelve to eighteen inches in the dwarfs, should be removed (which is best done by pinching them off as soon as they appear,) as well as all suckers. This will give you a fine head, and produce a much handsomer appearance than when the plant is left to grow wild. It will also be necessary to prune them somewhat during their growth, but this must be left in a great measure to judgment of the cultivator. The only general rule we can lay down is, that the centre

of the plant should be kept open, and that no cross branches should be allowed. Some varieties require considerable pruning, while others scarce any. One stake will not in this climate be always found sufficient. So luxuriant is the growth that the branches frequently break down with their own weight. Provision, therefore, must be made for supporting them, which may be done by either having the centre stake large enough to have pins run through them in different directions, or several stakes may be driven around to which the branches are to be tied. The first is the neatest, as these stakes never have a good appearance. Another mode of training the Dahlia is *en espalier;* and this is best done alongside of a walk. A trellis is provided, and two or three shoots being obtained from the roots, are tied to the bars of the trillis work, and trained fan fashion. The effect, if the plants are well chosen, is very good. There is yet another mode of training so as to make them cover a bed and appear like dwarfs. This is done by confining the shoots down to the ground with pegs as fast as they grow long enough. To do this well, it should be commenced at a very early period of their growth. The distances allowed between each plant must depend on the luxuriance with which it usually grows. A bed covered with Dahlias treated in this way has a beautiful appearance. Much, however, will depend on a judicious choice of flowers, and the proper mingling of the colors.

Preservation of the Roots during Winter.—As soon as cold weather approaches, some light litter, such as straw, leaves, or tan, should be placed around the stalks, which will prevent their being killed too low down. Tan is the best, the others being easily blown away. As soon as the tops are killed, they may be cut off and taken away. In the neighbourhood of Charleston, and even somewhat further North, the roots need not be taken out of the ground, *unless the situation be a moist one.* When the plants have been grown in a light dry soil, little danger is to be apprehended from the severity of our winters. They must, however, be well protected where they stand, and this is done either by covering them well with fresh stable manure, leaves, straw or tan. All that is necessary, is to prevent the ground from freezing around them, and special care must be taken that no water lodges near. If it is deemed advisable to take them up, they may be packed away in dry sand. Some, however, recommend their being merely laid on a board floor or shelf in a dry room, and covered with straw, which enables you to overlook them occasionally, and the *tallies* are better preserved than when packed away in sand. Care, however, must be taken, that the temperature of this room is always kept above the freezing point, or all may be lost in a single night. On the whole, we have found the plan of leaving them in the open ground, much the best, having lost fewer in that way than any other; and it is certainly attended with less labour. In February they should be taken up, divided, and again planted ont, but never in the same spot where they grew the preceding year.

We have now given all that is necessary to be known at present. We shall, in some subsequent number, treat of the artificial fecundation, to obtain new varieties,—the exhibition of Dahlias at shows; and conclude with a list of some of the choicest new varieties now to be obtained in the United States.

THE SUBURBAN GARDENER.

UNDER the above title, Mr. Loudon has published a work replete with highly interesting information, embracing nearly every thing which is necessary to render a suburban residence agreeable,—from the selection of a house to the laying out and planting of the grounds.

From this work, we propose, from time to time, to make copious extracts; but we cannot promise any connected series, for the whole is so interspersed with discussions or directions, which are either local in their nature, or unsuited to our climate and condition, that this would be impossible, without publishing much which would be uninteresting to our readers. In the selections we shall make, we wish to be distinctly understood, as not endorsing all that is advanced. From some of the opinions we may dissent, and some of the directions may not be applicable to our climate, or require modifications, but yet be so blended with other useful matter as not to be separated without injury to the extract. When these are decidedly wrong, and may prove injurious to the inexperienced, we will point them out in notes appended to the extracts; but generally, we will endeavour to make such only as will not require these from us. We give, in the present number, a list of fruit trees suitable for a small garden, and the reader will bear it in mind, that they are intended for the climate of England, yet we think that most of them would answer with us. We also give a selection of vegetables; from this we have nothing to dissent. We intend, in some future numbers, as soon as we can have the plates engraved, to give many extracts for laying out and planting flower gardens.

[ED. SO. CABINET.

SELECTION OF FRUIT TREES.—As the object in view in planting this garden is rather to produce the fruits most useful in a family, than to grow a great variety of sorts, the first point is to consider what kinds are best adapted for the kitchen. Of these apples are the most wholesome for children, and are not only useful for pies and puddings, but excellent roasted, or boiled down with honey, so as to make a kind of sweetmeat, resembling that called by the French resine, to eat instead of butter with bread. Pears, when of the melting kinds, are both very agreeable and very wholesome, to eat raw; but they are seldom used in England for any purposes of cookery, except stewing; and this dish, when made palatable, is generally too rich for children. Of stone fruits, damsons are the most wholesome, and most easily preserved; and morello and Kentish are the best cherries for cooking. Gooseberries, raspberries, and red currants, with a few black ones, are also extremely useful for all purposes of cookery, particularly preserving. One of the most useful apples for the kitchen is the Hawthornden, which comes in early, bears abundantly, and falls (softens) well in boiling; but the fruit does not keep, and, in some soils, the tree dies off at an early age. The Keswick codlin is also a good and early kitchen apple. The Ribston pippin is an excellent fruit, either for the kitchen or desert; but the tree is not quite so hardy or so good a bearer as either the Bedfordshire foundling (a very large apple,) or the king of the pippins. The Brabant bellefleur and Wormsley pippin are, also, very excellent apples. The best keeping apples for winter use are the northern greening and the French crab, the latter of which will keep two years. For pears, the best for the table are the beurre de Capiaumont, the glout morceau, and Marie-Louise, all excellent bearers. The earliest of the fine-flavoured pears is the jargonelle; but it will not keep longer than a week or ten days. The best pear for keeping is the Easter beurre. The best cherries for the kitchen are the Kentish or Flemish, for the early crops, on account of their juciness, and the smallness of their stones; and, in the autumn, the morello, for making cherry brandy and

preserving. The wild, or black cherry, which ripens between the kinds mentioned, is a very rich fruit for pies or puddings; but the stones are large in proportion to the pulp, and it continues in season but a very short time. Of plums, the green gage, the early and late Orleans, and the Shropshire or prune damson, are the best. The wine sour and mirabelle are also frequently used for preserving; and Gisborne's plum is an extraordinary bearer. Of grapes, the most productive, in the open air, are the esperione and the white muscadine; the best for wine-making is the black cluster. Of peaches, the best bearers are the grosse mignonne, the Royal George, and the Bellegarde; the last a most excellent sort. The best nectarine is the elruge, and the best apricot for the table is the Moorpark; though the Breda, which is a very abundant bearer, is most useful in the kitchen, as it not only makes a delicious preserve when ripe, but excellent tarts when green. The best bearing fig is the large blue or purple fig, which ripens well in the open air, and early; but the brown Brunswick is also much recommended. The best gooseberries for preserving green, and making green gooseberry wine, or British champagne, are the rumbullion and the white Dutch. The Warrington, the whitesmith, and the early rough red are great bearers, and afford excellent fruit for the table, and for preserving when ripe: the roaring lion is the best bearer of the large sorts. The common, or Dutch, red currant is the only one used for pies and puddings, and is the best for preserving. The black currant is used for making a kind of jam, called rob, which is thought good for sore throats; the black Naples produces the finest fruit. The best white currant is the white Dutch. The red Antwerp raspberry is the best, both for the table and preserving; and the white Antwerp has the finest flavour for the dessert. The only strawberry that is suitable for preserving is Keen's seedling, and it is also the best and most regular bearer. The red alpine is high-flavoured, and continues in bearing many months, but the fruit is small. The scarlets are the only kinds used for flavouring ices, and the variety called the Duke of Kent's scarlet is esteemed the best. The old pine is the finest flavoured of all the strawberries, but it is a very uncertain bearer.

Selection of Culinary Vegetables best adapted for small Suburban Gardens.—Of the cabbages, Knight's early dwarf, introduced in the year 1835, and the early Battersea are the best kinds for the early crops; and the latter will be found suitable for the secondary summer, autumn, and even winter, supply. In most cases, these will be found sufficient, as late cabbages are seldom grown in suburban gardens; but, where they are thought desirable, the late sugar-loaf may be chosen. Red cabbages are useful for pickling and stewing in the Flemish manner. The kind usually cultivated is the Dutch red; but the dwarf red, which is not much known, is more delicate for the table. The dwarf Savoy is a very useful winter vegetable, as its flavour is improved by frost if not too severe, and it will supply the table with greens from November till spring. Brussels sprouts are a delicious vegetable, and should, if possible, be raised from seed ripened in Flanders, as the plant is apt to degenerate in this country. Scotch greens, or German kale, are very useful winter vegetables, as, when the heart is removed, the stalk continues for some months to send out side shoots or sprouts. The cauliflower is rather a difficult vegetable to grow well, as it requires an exceedingly rich soil, and careful culture. To have it early, it must also be protected during winter; and, as it is a vegetable that is brought to market in very great perfection, not being much injured by keeping a few days, it is better to purchase it when wanted, rather than to attempt to grow it, unless there is abundance of room. Purple Cape broccoli is not liable to the same objection, as, if sown in May or June, it will produce a good crop from August till December, unless destroyed by frost.

Of the leguminous vegetables, the best kinds of peas for a small garden are the blue Prussian, the dwarf marrowfat, and the white Prussian, or poor man's profit; or the white rouncival and Knight's tall marrowfat, where tall-growing varieties are wanted. We would not recommend any early pea to be grown, as these are generally very inferior in flavour to the others; but where one is thought desirable, the early Warwick is said to be the best. For a late pea, the late blue dwarf Spanish has been strongly recommended. For beans,

where it is thought desirable to grow them, the early mazagan, and long pod are the most fruitful; but the broad and green Windsors are generally preferred for the table. We have already mentioned that the scarlet runner is the most profitable kidney bean. For potatoes, the ash-leaved and Rufford kidneys are to be preferred for the first crop; but Shaw's early and the champion, though they are both very prolific, and are those generally grown for the London market, we can by no means recommend, either for their mealiness or their flavour. For turnips, the early white Dutch and the yellow Dutch may be chosen; but the Teltow, or French, is well worth cultivation, on account of its sweetness, and the richness it gives to soups. The Teltow is the smallest of all turnips, not having more leaves on it than a radish; and, when used, it should be only scraped, and not pared, as a great deal of the flavour is in the rind. For carrots, the early horn is best for an early, and the Altringham, or Altrincham, for a late, crop. For parsnips, the Guernsey grows to a large size, and the Siam is particularly well flavoured. The dwarf red beet is the kind best grown in gardens. The Flanders spinach is greatly to be preferred to the common kind, and will be sufficient for a small garden; but, where there is room, the white beet and the New Zealand spinach may be grown, to afford variety and a crop in summer, when annual spinach runs too rapidly to seed. For onions, the early silver-skinned and the Deptford may be recommended. The Portugal and the Spanish are mild, and grow to a great size, but do not keep well. Of leeks, chives, garlic, and shallots, only one kind is in general cultivation. Of the plants used in salading, the best are, the union cabbage, and the large Brighton Cos lettuce, the Batavian endive, the variegated chicroy, the curled-leaved and broad-leaved Normandy cress, and the scarlet and white turnip radishes. The best celery is the Italian. The curled-leaved parsley is the handsomest for garnishing, and answers equally well with the common for all the purposes to which parsley is usually applied.

METEOROLOGICAL OBSERVATIONS FOR 1839.

Taken near Robertville, Beaufort district, So. Ca. Lat. 32°, 34'. 48" *N. Lon.* 81°, *W. Distance from the sea, about* 50 *miles. Face of the country, open piny woods, interspersed with Cypress ponds. By* Sindey Smith, M. D.

MONTHS of the year 1839.	THERMOMETER. Maximum.	Minimum.	Range.	Monthly Mean.	Temperature of Well-Water.	BAROMETER. Maximum.	Minimum.	Range.	WEATHER. No. of Fair or Dry Days.	No. of Cloudy or Days of Rain.	Variations of Tem. in 24 hours.	No. of Inches of Rain.	WINDS. most prevalent.
JANUARY,	74	27	47	49		30.20	29.35	00.85	17	14	33	6.750	N. E. and N. W.
FEBRUARY,	73	26	47	51		30.22	29.59	00.63	19	9	25	2.125	N. E. and N. W.
MARCH.	80	21	59	57		30.34	29.61	00.65	24	7	34	3.500	E.N E.-S E.-N W.
APRIL.	82	47	35	66½	60½	30.16	29.09	00.08	28	2	20	2.000	E. and N. E.
MAY.	87	53	34	72	63	30.25	29.81	00.44	25	5	28	2.598	N. E. E, and S. E.
JUNE.	98	61	37	79	67	30.17	29.78	00.39	20	10	24	3.493	E. N E.-S. S W.
JULY.	95	65	30	78½	69	30.27	29.95	00.32	15	16	22	3.787	E. S. E. and N. W.
AUGUST.	87	63	24	77½	70½	30.16	29.27	00.89	15	16	19	8.063	E. S E.-N. E-S W.
SEPTEMBER.	88	57½	30½	73	67	30.27	29.96	00.31	28	2	20	1.485	E. NE.-S E.
OCTOBER.	83	51	31	67½	65	30.43	29.97	00.46	23	8	20	0.121	E. N E.-S E.
NOVEMBER.	79½	28	51½	53½	60	30.58	29.86	00.78	19	11	25	4.164	NE.-S E.-N W.
DECEMBER.	65	19	46	43	54	30.26	29.21	1.05	23	8	31	2.379	N W.-N E.
ANNUAL SUMMARY.	98	19	79	64				1.05	257	108	34	38.307	EASTERLY.

Sample of the Coldest and Warmest Days in each Month of A. D. 1839.

MONTHS of the year 1839.	Coldest D'ys Sunrise.	Coldest D'ys 2 o'clock.	Coldest D'ys Sunset.	Coldest D'ys Average Temp. of the day.	Warm't. Days. Sunrise.	Warm't. Days. 2 o'clock.	Warm't. Days. Sunset.	Warm't. Days. Average Temp. of the day.	WINDS	Character of the Month.	Incidents and Remarks.
Jan. 1st. - - -	27	44	"	35½	"	"	"	"	S.W. and N. W.	Pleasant Winter, mild, no violent changes, the greatest 43° to 73°.	The Winter has been mild, uniform and healthy. During the first part no violent changes. On the 16th Feb. Willows exhibited a visible green. Peach trees, jonquils and violets in bloom. The season more advanced than in '38. On the 4th March, the ground was covered with snow. Ther. fell from 63° to 29°, being 34° in 24 hours. On the 31st March, there was frost, Ther. being 43°, but did no harm to vegetation. On the 4th March was experienced the greatest cold in the year.
" 8. - - -	"	"	"	"	59	76	55	65			
Feb. 7, - - -	26	58	"	42	"	"	"	"	N. E. and E.	Mild, dry and uniform; Barometer high most of the month.	
" 9, - - -	"	"	"	"	65	73	65	67	S. W. N.W.		
March 4, - -	32	39	26	29	"	"	"	"	N. E-N. W.	Dry and seasonable, except one wintry spell; on 22d, Rain 2¾ in.	
" 19, - -	"	"	"	"	57	81	73	70	S. S.W.		
April 15, - -	49	65	"	57	"	"	"	"	North.	Last Frost on the 15th; Ther. 49°—Month pleasant but dry.	
" 17, - - -	"	"	"	"	70	81½	70	74	N.W and W.		
May 11, - -	58	62	61	60½	"	"	"	"	N. E.	Pleasant and seasonable, the latter part dry.	
" 23, - - -	"	"	"	"	69	87	"	78	S. E.		
June 5, - - -	63	77	70	70	"	"	"	"	N. and W.	Middle very hot, latter part very dry, healthy and vegetation forward.	
" 13 & 14, -	"	"	"	"	81	94½	88	87½	S. N.		
July 16, - - -	65	81	"	73	"	"	"	"	N.W. and E.	Dry and pleasant.	
" 25, - - -	"	"	"	"	74	95	83	84	N. and E.		
August 16, -	63	78	"	70½	"	"	"	"	East	Rain enough for ordinary season, pleasant with some cool changes.	
" 2, - -	"	"	"	"	78	87	"	82½	S. E.		
Sept. 15, - -	58	73	"	65½	"	"	"	"	E. and N. E.	Extremely dry; 22 days drought, followed by very light Rains.	
" 9, - - -	"	"	"	"	75	87	85	82	S. and N.E.		
Oct. 21, - - -	52	57	"	56½	"	"	"	"	N. E.	Many cloudy days, but not rain enough to lay the dust.	
" 13, - - -	"	"	"	"	66	80	"	73	S.E. & S.W.		
Nov. 22, - - -	28	43	"	35½	"	"	"	"	N. W. & E.	First part dry, remainder moderately wet, uniformly cold, with frequent high winds.	
" 15, - -	"	"	"	"	56	79½	70	68	S. W.		
Dec. 30, - - -	22	44	"	33	"	"	"	"	N. E.	Dry and steadily cold, a few light rains, winds high and frequent from N. W.	
" 7, - - -	"	"	"	"	58½	65	"	62	S. and S.W.		

Remarks.—The fall of rain on the 22d March, as noticed in the tables, was the greatest here during the year. It was very extensive, and followed by destructive freshets throughout the up country. The extreme cold of the 4th March, is not a little extraordinary, in as much as for the last seven years successively, we have had either a freeze, a sleet or snow, at or

about the same period. The last freeze in spring was on the 6th March. The greatest heat observed of the sun was 130°—placed on a Dial plate, the Thermometer rose to 136°. The high temperature of our Well Water during summer will be remarked. It partly proceeds from the shallowness of our wells, they being generally between 15 and 25 feet deep. If 60° is the only proper medical temperature for the cold bath, we should never enjoy its grateful relief in the dog days without ice, or other artificial aids—and Northerners might suspect us of being ignorant of cold-water. Yet our waters are cold enough for all agreeable and healthful purposes—"Providence tempers the wind to the shorn lamb."

The Aurora Borealis, noticed in September, is rather a rare phenomenon in our Heavens, and was much richer in hues and more brilliant, than it usually appears in a Southern latitude. It was simultaneously perceived throughout the Northern States, and noted as uncommonly splendid. Its appearance here resembled somewhat the morning Aurora, preceding a brilliant sunrise with blue and sombre rays, converging towards the Zenith, and with rapidly changing hues. It somewhat resembled a distant fire in the woods, as seen through a pine forest, and for which it seems to have been mistaken by a neighbour, who, in great hurry, ran out, with all hands, to arrest what he supposed a formidable conflagration bearing down upon him—a most unwelcome visitor at such an extremely dry time. He wondered at its seeming further as he advanced. But he soon found out he was pursuing an Ignis-fatuus in the skies.

Reviewing the year, we find it, on the whole, particularly worthy of Agricultural remembrance. Although one of the driest, (the quantity of rain not exceeding 38½ in., about half the amount of water that usually falls) it was, notwithstanding, very propitious to Farmers and Planters generally. The provision crops, for the most part, where well cultivated, proved sufficient; and the Cotton crop exceeded all calculations made early in the Fall, at which time very few looked forward to more than half the actual result. In this neighbourhood, greater returns of Cotton per acre have not been obtained in any of the last ten years. From 12 to 16 hundred nett per hand, is quite common; and some accounts published from Edgefield, state the names of two Planters who made as much as 10 bales per hand. The year prior, though equally dry, and with an annual mean temperature, differing from the past by a mere fraction, (both being about 63°,) was yet far less productive of Cotton. This may be theoretically accounted for, from the more equable distribution of heat and moisture throughout the growing season, in the past, than in the former year. The Spring, too, was more forward and congenial to the growth of vegetation, which continued unchecked by any late frost. But a tabular examination of the four subsequent months of each year, more fully explains the difference. The average temperature of June, July, August and September, was nearly 10° less in '39, than in '38. The Cotton plant delights in dry weather, but it must have moisture enough at the critical time of blooming and forming its fruit. At this period of both years, rains were greatly lacking. But in the former year, the drought was attended by a cloudless sky; very hot nights; with little or no sensible dew; and the Ther. ranging a length of time above 90°. In the latter year, whilst there was as great a lack of rain, all water courses being much lower, yet the range of heat was much less, and

more cloudy days, and cooler nights, compensated for the deficiency of rain; in more frequent dews, which tended greatly to nourish vegetation. Heavy falls of rain are often hurtful to the Cotton plant, but those frequent, and almost insensible deposits of moisture which bedews the earth, under a cool atmosphere, are real sources of fertility. And such were common up to the conclusion of the past year, while the want of rains continued, and showers occurred like "angel's visits," "few and far between." It was thus that the late crop was sustained and nourished to the end—and with never an excess of moisture to produce a second growth, and shedding of its capsules, and no early frosts to cut short its growth; it resulted far and near in a golden harvest, seldom equalled. But finally disappointing the hopes of the cultivator in its reduced market value, by the excess of its own production. The deficiency of the Cotton crop, for several years past, produced a stimulus in the commerce of half the world. The surplus now produced, will occasion a retrograde action of a like extent—a prominent instance of the Planter's relation to the promotion of commerce and manufactories of every description. It evinces how a few propitious or unpropitious days in a Farmer's calendar, indirectly affects the enterprize and interests of thousands unknown—

"O! fortunatos nimium, sua si bona norent,
Agricolas"———

In conclusion, we have no better thought for our purpose than is contained in the extension of some remarks found in the late President's Message—That the past season gives particular evidences of the benefits which spring from the steady devotion of the husbandman to his honorable calling—and that while nothing compensates a people for the dependance upon others for the bread they eat; that cheerful abundance on which the happiness of every one depends, is no where so surely to be found as in the industry of the agriculturist and the bounties of the earth.

SIDNEY SMITH.

We record, with much pleasure, the Meteoroligical Observations of Dr. Sidney Smith. Such documents are invaluable to all who desire to ascertain the changes our climate has undergone, or is undergoing, or to compare it with that of other regions. We wish to collect and preserve all such as have been carefully made, and we request the favor of any of our friends who have such, to transmit them to us for insertion in the Cabinent. Dr. Smith has promised to continue to record his observations, and we request the favor of those who have the necessary instruments, in other districts, also to record the meteorological changes which may take place in their neighborhood, and to forward them at the end of the year to us, for publication. We do not confine this request to our own State, but make it of our friends in all the Southern States.

[Ed. So. Cabinet.

TALES, SKETCHES, &C.

BLANCHE ROSE.

A LOVE STORY OF THE TWELFTH CENTURY.

The bells of Toulouse were chiming for primes. The spires, steeples, and turrets fluttered with pennons and banners, and clustered with caps and bonnets like swarming bees. The main street was lined by the Burgher guard, and crowded with citizens, strangers, troubadours, and minstrels, above whose motely show the windows and galleries were hung with cindon and arras, and filled with scarlet gowns, furred tabards, and all the riches, splendour, and beauty of "*Bel Languedoc.*" A deep stillness reigned in the crowd, and all eyes were turned towards the east gate, where a triumphal arch crowned with the laurel, palm, and the white cross of Toulouse stood as high as the partizan of the city port.

"Santa Madre! what jour de fête is this?" said an old pilgrim, as he pushed through the men-at-arms at the barrier.

"In the name of St. Jaques de Toulouse where did *you* come from?" replied one of the sergeants, glancing at his cockle-shell.

"That is no point of your charge," replied the stranger; "but I would know what saint you are going to celebrate."

"Truly we call him not saint as yet," replied the sergeant; "Though I doubt not he is as good as St. Dennis, or St. George, or any other St. Chevalier in the calendar; but in respect to the canonization, he is yet only *Raymond de Toulouse*—'*La Fleur de Chevalerie*'—'*la lame de France*,' our young Prince that shall return to-day, with the glory of heaven and earth, from the holy croisade."

The pilgrim crossed himself, and while he was yet speaking with the guard, the sound of cymbals, kettle-drums, and a "corps d'harmonie" came faintly through the still sunshine.

"*On viens!*" exclaimed the sergeant; and the billmen, eagerly clearing the passage, closed up their array, and stood silent under their arms.

The music advanced slowly, till the deep knell of an eastern march could be distinguished, and the thick heavy trample of horses upon the road; every eye fixed upon the gate, as the music approached, till suddenly the clattering hoofs and the dark mailed horsemen and forest of lances came through into the sunshine. The long black line of men-at-arms poured slowly down the street, till the bright tabards of the heralds appeared at the gate, followed by the great banner of Toulouse, and all the peers and paladins of the array.

In the midst of his knights, mounted upon a blanche Arab, and glistening in the white battle habit of the cross, the Earl rode before his banner, surrounded by his officers, and followed by all the chivalry of Languedoc and Provence. His pale noble countenance wos clear and serene as the sun that shone upon him, and his long black hair fell like waves of raven silk from the jewelled helmet and glittering lambroquin, which shook like a glory about his armed head. A rending shout, "*Vive! Vive! vive le*

Paladin del croix!" went up like thunder from the crowd; and the waving of bonnets, scarfs, and glaives, fluttered and flashed, and glistened down the street before the banner, like the tossing and glimmering of flowers before the breeze.

By the side of the earl, rode his sworn brother in arms---the beautiful and gallant Auguste de Valence, son to King Remi of Provence---called "*La Fleur de France,*" "*Le Bel du Monde,*" and the second knight of all the Christian chivalry; but the eyes of the people passed over him as he rode beside the young prince, who, in the opinion of the troubadours, came nearer the beau-ideal of chivalry,---"*Sir Galahad du Sangraal,*" than any other knight who had ever lived. All the way as he came, garlands, and crowns, and showering flowers rained upon his helmet and housings; and the people wept, and knelt and blessed him, and held up their children to see his face, and cry "*Vive la glorie de France!*" The young prince came white as his surcoat, and bowed his glorious head to the pall on his horse's mane. "*Soli* DEO *gloria!*" said he, "*Soli* DEO *Gloria! et non nobis* DOMINI!"

It was long before the court passed down the street, but at length the Earl entered the Grand Place, and as he passed under a large house near the cross, looked suddenly up to the galleries. That house alone in the square was silent and deserted, the silk curtains were drawn close in the windows, and the heavy galleries empty and desolate. The prince turned suddenly and spoke to the grand almoner, and the colour came into the face of the old man, but what he answered could not be heard in the crowd.

In a few moments they reached the gate of the episcopal palace, and the long glittering lambroquins and tall lances poured through into the court till the gate closed, and the black column of men-at-arms filed past towards the castle. But the crowd still remained before the palace, and in a short time a sumptuous cavalcade of the city procession came through to the gate, and the stately companies of peers, knights, and ladies, began to arrive for the banquet prepared to give welcome to their price.

All the noon and till the sun grew low, the clangour of the wild eastern music came from the portals, and the gaths-stairs, and the galleries were crowded with valets, pages, pursuivants, and men-at-arms; but as the evening came and the twilight began to fall, the quiet of closing day succeeded to the hurry of the noon, and only a bright page, or an over-wassailed trooper was seen here and there flitting through the dim courts, or elbowing the narrow street, as if it was too narrow for a victorious crusader, who had ridden upon the plains of Zebulon and Naphthali.

It was near dark; the Chateau was dim and still, and the quiet of feudal solitude had succeeded to the hurry and glitter of the baronial pageant and military parade. At times a sudden roar of songs and voices came from the ward rooms, but only one still watch-light shone upon the moat, and already the pages were taking their respective turnpikes, and the seneschal was putting off his furred gown within his closet; for as yet the great had not fallen into those extravagant *late* hours which made them invisible to their *poor* suitors at *eight o'clock before noon.*

In the midst of this quiet, a tall figure wrapped in a dark mantle came out from the west postern, and turned hastily towards the Grande Place. The full moon was rising over the dim houses as he entered the square; and as he looked up to her bright face, it discovered the pale noble countenance of Raymond de Toulouse. He passed hastily to the house

which he had noticed at his entry, and stopping at a small port under the garden turret, unclosed the door and passed into a little wilderness of cypresses and olives. He walked forward through the dim alleys, like one well acquainted with their windings, till he came to a vast plane-tree, which overshadowed a little green seat beside the Garonne.

A white female figure sat upon the turf, her long black hair loose upon her neck, and her silk gown glistening on the grass like a continuation of the moonlight which glimmered on the water, and to which she gazed with such fixedness that the knight was at her side before she heard his step.

"BLANCHE ROSE!" said he, in a still gentle voice; she started and drew a long quivering breath, but as she looked in his face, she sprung from the ground,—"*My own very dear prince and brother!*" she exclaimed, and fell upon his bosom, and wept without a word.

The prince held her in his arms and bent over her till her emotion subsided into the low tremulous sobs of an infant's tears. Several times the earl strove to speak; but his voice failed at that sad trembling breath that fluttered upon his bosom.

"Dear Blanche," said he, at last, "what is this?—they would not tell me—but *you* will tell me."

The lady started and shuddered, and her face sunk closer to his mantle.

The tears came to the eyes of the young knight—"My own dear Orpheline Ladye—the child of my foster-mother—*you* do not fear to speak to *me!—to your brother?* look up on the face that used to rest on the same bosom—sleep in the same cradle—and this the hand—that was once the little helpless hand that clung to the same breast with yours—Now to HIM be the glory! The battle arm that holds the thunder and the lightning against all that should do ill to my dear sister."

Blanche burst afresh into sobs, and would have sunk out of his arms but for his strong hand; but he supported her in silence, till at last her tears ceased, and she leaned still and breathless, and deathly heavy on his arm. Raymond looked upon her bright lovely head that lay motionless upon his clock, and smoothed the raven locks from her pale brow. "Alas!" said he gently, "where is your own *white flower* that used to be so bright in these dark waves?"

"La-Blanche-Rose" trembled like the leaves that quivered in the moonlight—"*Fallen—gone—withered in the dust!*" she murmured fainting.

The earl's hand shook, but he did not speak, and for a long time they stood without a word.

Blanche rose up from his arm, and swept back the hair from her pale death-face. "Raymond!" said she, "I will speak to you as a knight's daughter should speak to a knight's son.—I was—your very dear true sister. *I am*"—her voice choked and struggled—"no more your sister—no more my father's daughter—a poor—lost—fallen maiden! I was the last of his race that was the father of kings. I shall be the first—the mother of one—*who will never have a father!*" She sunk down upon the seat and buried her face in the grass.

Raymond stood silent and fixed, and held her hand—but it did not move again, and lay cold and still, and heavy as the dead clay. "My dear sister!" said he at last, "what, who has done you wrong!"

Blanche did not speak nor lift her face, but drew away her hand, and immediately it returned with something bright to the moonshine; as

Raymond stooped it flew open, and he saw the glorious beautiful features of Auguste de Valence.

"*La Bel du Monde!*" he exclaimed.

Blanche did not move nor answer, and his eyes rested fixed upon the miniature, as it lay open in her passive hand.

"What has *he* done?" said the earl, in the deep calm terrible voice with which he used to speak in battle.

Her voice spoke faintly from the ground; "*He* has shed the rose from my brow that shall *never* bloom again!"

Raymond fell on the ground, his long hair spread in the dust, and his bright noble terrible battle-front bowed like a child. The white fingers of the maiden closed convulsively upon the gold, and the bright robe trembled on her slender form, like the lights upon the stream.

Raymond rose up; his lips were white as death, but his eyes calm and steady; and he stooped and took her passive hand and kissed her cold lips. "Ladye! my very dear love and sister!" said he, "it is gone! it is passed away!—to-morrow your white flower shall bloom on your brow, clear and stainless as ever it shone in the sun!"

Blanche started and glanced wildly up; but the sudden light of her eye fell, and she clasped her hands on her face, "He is married to another!" said she.

Raymond grasped her hands. "Look up!" said he: "look on the fair moon; she is rising as you and I have seen her rise when we were happy, careless infants on this bank. When she rises again, you shall look upon her clear and bright, and spotless as her face that smiles upon you!"

Blanche looked long, and fixed, and calm upon him, and dropped her eyes, and shook her head. "The grave—the fire that washes out all spot—the mercy of God shall take away my stain, but never man on earth!"

The Earl turned away, and held her hand, and the tears run down his face. At last he loosed his surcoat, and undid the white cross from his neck. "I took it at the holy shrine," said he, "at His foot where all sins shall be forgiven; it has brought me through battle, and tempest, and the black death,—by His might it shall bring you through peril worse than death. Take it; pray for me: and when we meet again you shall be the bright, beautiful, glorious lady of the world that ever you were in life!"

He tied the cord on her neck, and laid the pearl in her hand, and long spoke and strove to console her, but she could not be comforted and sat still and silent upon the grass; her hands dropped in the cold dew, and her eyes fixed blank and dim upon the moonlight that floated in the water.

Raymond stood and gazed upon her till his face grew white as hers; but suddenly the light came to his eyes, he laid his hand upon the cross of his sword—"By His might and His hope, *I hold* the spell of your fate!" said he; "to-morrow it shall be broken!"

* * * * * * * *

The gray dawn was breaking in the forest of Maris, and the dim cold light began to glisten upon the pale flowers and the dewy leaves of the wood-sorrel and colt's-foot which clustered about the feet of the old oaks. No sound came through the still thickets but the chime from the distant convent, and the light trip of the buck pricking among the leaves; even at that quiet hour he started at the mass-bell, suddenly topped his crop-

ping lips from the grass, and bent his ear, and held up his nose in the wind; but he returned to his browsing, and wavered through the wood, till he came to the brink of a small deep glade; he stopped suddenly, and pricked his ear, and glanced his bright eye into the hollow, and for a moment stood and felt the wind, but in the next his white single went over the long fern like a flash of light, and he vanished into the deep thicket. For an instant his short bound came from the moss, but nothing stirred nor appeared where he had looked, and the light began to brighten and the birds to sing, but all was still and solitary.

The red rose of the morning began to appear through the trees, and the white mist went slowly up from the glade, and under an oak leaned a tall dark man, his arms folded, his back to the tree, and his brown cap and deep mantle, scarce distinguishable from the knotted and fantastic shapes of the old trunks that stood about him.

As he leaned and gazed upon the path, a quick step rustled on the leaves, and suddenly the light noble figure of the Auguste de Valence came out upon the glade. For a moment he stopped and glanced round. The man rose from the tree, and dropped his cloak, and came to the green—*Raymond de Toulouse.*

Auguste cast his mantle, and put off his glove, and they drew their swords and confronted each other without a word. For a moment they stood upon their guard, point to point, eye to eye, foot to foot, and neither gave hit nor foin; but in the next Auguste made a feint and plunge that might have foiled the best hand in France, but the blade glanced like a reed from the sword of Raymond, and for several moments the glade echoed to the quick clash and the heavy fearful trample of the mortal assault. But it might have seemed only a skillful "passage at arms," neither being able to foil the hand of his opponent, till Auguste made the foin that he was never known to fail, and the sword went through the kirtle of his antagonist, close beneath the arm. The point glittered at his back, and the blood gushed down his green hose, but he did not fall nor stagger, nor drop his hand; and they closed, and clashed, and showered blows, till the blood run from every limb, and breathless and exhausted they dropped their points, and stood apart to breathe. For an instant wiped their brows and drew their breath, and undid their kirtles to the wind; and Auguste sat down upon a mole hill, and the earl leaned to a tree, and each glanced at times to the other, till suddenly they started to the green, and renewed the battle with the same mortal determination. The sun was rising as they struck the first strokes; and whether it shone in the eyes of Auguste, or that the earl had the better, he made a sudden feint, and in the next moment the hilt of his sword was against the breast of his antagonist, and the blade a red half ell beyond his back.

De Valence sprung like a stricken hart, and fell upon the turf without a word; the blood gushed out from his mouth and breast, and in a moment his eyes began to change, and his lips became blue and cold. Raymond threw himself upon his knees by his side, and clasped his hand, and raised his head, and strove to stanch the blood, and gazed wildly upon his closing eyes—"God give mercy and grace!" he cried, "that *I* should do this!"

Auguste opened his eyes and grasped his hand—"True and noble friend," said he, "you were ever kind and faithful to me in our lives, and this that you have done now is the best and truest deed of all.—I thank

God—I bless you—pray for me—forgive me—but oh, *she* never can!" ——and he turned his face to the earth.

The earl's tears dropped fast upon his cold brow, and he held his hand without speaking, as his breath came in short painful sobs, and the cold death-dew rose upon his forehead; he gave a sudden shiver, and his hand caught upon the hand of his friend—"Say a prayer," said he: "bid God sain; and let *her* pray for me when I am gone!"

Raymond cast up a sudden look—"Holy saints!—and no priest!—none to say him shrift!"

The dying knight pressed his hand—"Hold up your cross," said he, "and let me look upon it till I pass away. If I had but a cup of water!"

Raymond glanced eagerly round the glade; a little blue streamlet fell through the grass upon a hollow of the mossy rock, and hastening to the spot, he filled his bonnet at the well, and hurried back to the dying man. The eyes of Auguste had closed, but when the water came to his lips he opened them and looked up; a faint light came to his cheek; and he raised himself on the arm of his once brother.

"I will confess my shrift to *you*, my true brother," said he, "and you shall tell the priest, and pray for me, and there will be mercy."

The earl bathed his face, and held him in his arms, and lifted the cross before him; and the knight clasped his dying hands on his, and confessed to him, as if he had been a monk in holy quire. His strength ebbed away with his last words, and he sunk heavy and breathless upon the breast of Raymond. The knight dipped his hand in the water, and signed his brow, and put the cross in his cold fingers—"God be merciful to you and forgive you," said he, "and speak that word that I dare not speak, and that none is here to speak in his name!"

The hand of the dying knight closed upon the rood: his eyes fell, and one sharp shiver, and he stretched out, cold and still, and gone for ever.

The earl gazed on his void face, and held his hand till it grew stiff and cold, and the eyes slowly unclosed and fixed in the death-glare. Raymond shuddered, and clasped his hands, and laid his head upon the turf, and the cross upon his breast, and spread his mantle over him, and knelt, and wept, and prayed beside him. At last he rose, and dried his sword on his sleeve, and put his bonnet on his head, and set his horn to his lips, and blew *the mort*.* In a few moments a little page came lightly through the trees with his white Arab; and as he led up the horse, looked upon the cloak, and trembled and turned pale.

"Sit beside him," said the earl, "and watch that no beast or bird come to do him wrong; and I will ride to the town, and he shall be buried as men should bury a king's son."

* * * * * * * *

The sun was set, and the twilight was almost gone; all Toulouse was in motion: the great bell of the cathedral tolled its heavy knell over the town; and the streets were crowded with a tide of people hurrying towards the main street. All the way from the chateau to the great church was kept by men-at-arms, and a constant wavering stir went among the tall lances, and an eager murmur of voices, interrupted only by the fearful toll of the bell that struck its death-knell at slow intervals.

* The death-note, or the blast that was blown at the death of a stag.

"Gramercy! what is this, that the great bell tolls!" exclaimed an old peasant to his merchant as he pushed through the crowd; "I never heard that knell but for the death of our earl."

"Then shall you well hear it to-day," replied the citizen; "for though he is not, as you shall say, dead in his body, he is dead in his glory and knight's fame."

"Saint Mary! of what speak you?" said the granger.

"Know you *La Rose Blanche?*" asked the merchant.

"*Peine de ma vie!*" exclaimed the old man, "do I know the moon, and the bright star when she rises at vespers?"

"Then shall you not marvel that the earl had the greatest love for her that ever knight had for a lady," said the burgher.

"Nay, truly," replied the peasant; "but I make great marvel to hear a bell toll, when all the chimes in Toulouse should be ringing merry!"

"You shall not make the lark sing at your holiday," replied the merchant, "nor a maiden's love come for your harping. This, that was the brightest that ever the sun looked on, minded a fair crown and broad lordship no more than you should value a cowslip fee in fairy-land; and likely for that they had been foster-children together, she thought of Earl Raymond but as a maiden may of her true brother, and would not be his lady though he had been king of France; at the least she *said* so. The count was near out of his mind, as all men know; but that which men know not---alas, that it should be to say---on the evening that he was to sail for the Holy Land, being alone with her to take his leave, fell such unknightly outrage as never prince did to a lady, unless it was Don Rodrique to count Palayo's daughter. The sweet gentle maiden never spoke charge nor word against him, but ever she was pale, and heavy, and broken of heart, and none knew why, till it could no longer be hid, and her shame flew fast and far as ever went the renown of the '*Blanche Rose,*' that had never peer of any earthly ladye. Fearful!---fearful!---she had to dree* when the priest came to curse her, and the bishop to make her speak, and the proud peers, her kinsmen, spoke of burning her on a hill, like queen Guinever; yet she would never tell the name of her false knight till this hour. But now when the earl came, he was all confounded in her peril; and for his great repenting, he hath confessed and accused him to the bishop, and now would do all the amende that may be to the heart broken maiden, and make her true lady and countess of Toulouse."

"And what is this that shall be done to-night?" said the peasant.

"The earl goes in his penance to the great church," replied the townsman; "and thereafter the Blanche Rose shall be your lady; and let no man nor maiden think her slight, because the silk mitten was not puissant as the mail glove."

"Truly I shall think her the truest and most dolorous lady that ever was named with lips," said the old man, "and the devil spit in his face that shall ever say contrar?"

As he spoke, a faint chorus of voices came from the chateau, and a great light appeared beyond the black crowd of helmets and lances. It advanced slowly up the street, and at length the heavy tread of feet could be heard through the crowd, and a choir of monks chanting the penitential psalms. The solemn strain approached, and rose and fell at intervals, till suddenly the crowd gave back, and the white monks and bright

* Endure.

torches came slowly into the square. All the convents of Toulouse followed in long procession, till a broad heaven of light shone upon the press, and discovered the dark shadows of the black penitents, preceded by their cross, and lightened by a thousand torches.

In the midst, bare headed, and bare footed, divested of all his feudal ensigns, with a torch in his hand and a chain upon his neck, Earl Raymond walked, in the white gown of penance; but his face was whiter than the cindon, and his eyes bent on the ground before the gaze and murmur that passed before him. A thrill of grief, wonder, and admiration passed through every heart which had so lately seen his crowned head, riding through that street, in all the light and glory of victory and the cross; and at each pause of the choir, a deep *"Amen!"* answered from the crowd. As the procession came to the high cross, the chant ceased, the train stopped, and the heralds lifted their hands and cried *"Oyez, Oyez! so should it be done to all knights, traitors to orphelines and maidens."*

A deep death-pause rested upon the crowd, and no voice answered back again; the heavy tramp went on, the chant rose up, and the procession passed on towards the cathedral.

The long lines of monks vanished like shadows within the deep arch of the great portal, till the white gliding figures reappeared in the light of the still choir, and the cowls, and gowns, and glittering glaives poured through the dim aisles, till the choir and nave was filled with the dark crowd. The church was hung with black, and lighted as for a soul-mass; and as the torches and the penitent advanced to the altar, the voices of the unseen choir, and the still peal of the organ went over his head, as if the saints and the seraphims mourned over him in heaven. Raymond wrapped his face in his mantle, and knelt upon the stone, and bowed his head upon the footstool of the altar, till the priest raised him, and set him on the "siege duloureux," in the sight of all the people.

The service of the penitents was performed, the monks extinguished their torches at the foot of the shrine, and the heralds advanced to the altar. Sir Raymond stood up and turned to the people, and the pursuivants took off his white gown and displayed his knightly habit and belt of estate. There was a terrible pause, and not a breath passed in the chapel. The heralds advanced to the earl and broke his sword over his head, and hewed the spurs from his heels, and rent the fur from his tabard: and immediately his shield and crest were spurned from the church door; the trumpets sounded on the steps and the heralds cried,— *"Raymond de Toulouse! Raymond de Toulouse! Raymond de Toulouse! traitor to God and his lady, and manswoorn of his knighthood; traitor knight, so is thy name cast out from true knights, and so I cast thy shame in thy teeth, and defy thee in the name of God. the defender of the orpheline and desolate!"*

The people stood cold and still, aud hushed as death; and the blood went out of the earl's lips, till they were white as his kirtle. The heralds sat down, but Raymond stood still and vacant, his arms hanging to his side, and his eyes fixed upon the air.

The bishop rose out of his arm chair and took the book in his hand; for a moment he stood and looked upon the knight.——

"In the garden of God, one little white rose grew amidst the flowers very fair and pure, and bright, the sweetest among the blossoms; the sun loved to shine upon it by day, and the moon by night; and the dew

and the rain watered it in the heat, and the breeze kissed it in the morning, and said, God bless thee, and he did bless it, till it was the fairest of the earth—and the trees bent over to keep it from the wind, and the birds sung to it at noon, and the angels of God looked down upon it, and blessed his name that he had made it lovely.

"God gave thee the flower, and the forest to keep and watch, and defend from all wrong; and he gave thee the oak, and the palm, the fair fields, and the still, green wood, and all that walked therein—and if this had not been enough he would have given thee more.

"Thou spared to come to the cedar, and the oak, and plucked the little flower that was lonely, and put it in thy bosom when it was sweet, and when it faded, cast it on the ground to die, and went thy way!"

Raymond fell on his face before the altar; and the people wept and sobbed, and sunk on their knees, as if their hearts fell with his who bowed before them. The bishop laid his hand upon the book—

"When the wicked man turneth away from his wickedness that he hath committed, and doth that which is lawful and right, he shall save his soul alive! Look up, my son; 'God is merciful and great to forgive us our offences!—He will see thy repentance and say, '*Thou shalt not die!*'"

The earl rose upon his knee, and the bishop laid his hand upon his head, and spoke the words of absolution, and laid the cross on his brow, and bid him rise. Raymond stood up and the prelate kissed him on the cheek, and belted him with a new sword; and the heralds braced clean spurs upon his heels, and put a crest of new device upon his head, and cried, "God make thee a new and valiant knight, and keep these arms to his service, to aid the widow, orpheline, and every one distressed and desolate, and maintain the right against all men who may live and die!" Immediately the trumpets sounded, and the pursuivants proclaimed him, lord, earl and knight; the furred mantle of state was cast over his shoulders, and he came out among his people Raymond de Toulouse.

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That night before the moon went down, Rose knew how she was cleared—but long she lay and wept upon his feet and would not be comforted; and when at last her strength and mind returned, it was in the strength of her despair, to fly to the bishop, and declare the truth; the hand of Raymond held her like an infant on the grass, but she had no hearing for his words, and would but wring her hands, and cry to be released to do him justice, till she sunk exhausted upon the turf. He watched by her through the night, and in the morning, when her spirits ebbed away and the strength of her delirium was past, she was subdued by his tears, and swore upon his head. The light came into his face and he kissed her and rose up—"*You never* broke your word," said he; "and now I will leave you!"

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On St. Bride's-day at noon, the earl, surrounded by all the chivalry and beauty of Languedoc, stood at the high altar where he had done his penance. Blanche Rose bent before the priest in the white bridal amice, her pale brow glistening with pearls and gems, and the *white flower* shining like a star in the long glossy tresses that fell upon her neck for the last time. The Earl put the ring upon her finger, the priest set the coronet upon her brow, and the heralds cried her, Countess of

Toulouse, at the high cross; amidst the shouts of the people, and the waving of ten thousand caps.

All the city was in a transport, for the constancy "of the bright lady of the world," and the self-justice of her supposed traitor knight. "Certainly," said the Vicar of St. John, "I think him greater for this repenting than if he had never had tache or spot, not to speak of *the ninety and nine in the wilderness;* he had then been but a *puisnie* saint, now he is lith and blood like to you and me, but so as you and I shall never be---the greatest mortal man that ever quelled sinful flesh."

A week of pomp and pageant, and all that the olden time held gay and splendid, passed through Toulouse like a night's masque, and again all returned to the quiet sunshine, and still business of a simple summer's day.

The countess lived in deep seclusion, partly for that the face of man was become terrible to her, partly for her feeble state, which might not suffer ceremony and fatigue. The leaves were falling, the birds had ceased to sing, and the sun looked sad and still upon the yellow fields, when the unconscious cause of her sorrow was presented to the barons of Languedoc in the great hall of Toulouse; "I do not wrong them," said Raymond to his heart-broken mother, as she wept at his feet,---"My blood runs in the veins of none living; there is none to claim the right---you shall make him worthy to hold the sword and the coronet of a brave people, and God and their service shall give him right, better than a name."

[TO BE CONTINUED.]

THE WIFE.

She flung her white arms around him---'Thou art all that this poor heart can cling to.'

I could have stemm'd misfortune's tide,
And borne the rich one's sneer,
Have braved the haughty glance of pride,
Nor shed a single tear.
I could have smiled on every blow
From life's full quiver thrown,
While I might gaze on thee, and know
I should not be 'alone.'

I could—I think I could have brooked,
E'en for a time, that thou
Upon my fading face had'st looked
With less of love than now:
For then I should at least have felt
The sweet home still my own,
To win thee back, and, whilst I dwell
On earth, not be 'alone.'

But thus to see, from day to day,
Thy brightening eye and cheek,
And watch thy life-sands waste away,
Unnumbered, slowly, meek;
To meet thy eye of tenderness,
And catch the feeble tone
Of kindness, ever breathed to bless,
And feel I'll be 'alone.'

To mark thy strength each hour decay,
And yet thy hopes grow stronger,
As filled with heaven-ward trust, they say,
'Earth may not claim thee longer,'
Nay, dearest, 'tis too much—this heart
Must break, when thou art gone;
It must not be; we may not part;
I could not live 'alone.'

THE LAST ARROW.

BY C. F. HOFFMAN.

"And who be ye who rashly dare,
To chase in woods the forest child?
To hunt the panther to his lair—
The Indian in his native wild!"—*Old ballad.*

The American reader, if at all curious about the early history of his country, has probably heard of that famous expedition, undertaken by the vicegerent of Louis the Fourteenth, the governor-general of New-France, against the confederated Five Nations of New-York; an expedition which, though it carried with it all the pomp and circumstance of European warfare into their wild-wood haunts, was attended with no adequate results, and had but a momentary effect in quelling the spirit of the tameless Iroquois.

It was on the fourth of July, 1696, that the commander-in-chief, the veteran Count de Frontenac, marshalled the forces of La Chine, with which he intended to crush forever the powers of the Aganuchion confederacy. His regulars were divided into four battalions of two hundred men each, commanded respectively by three veteran leaders, and the young Chevalier de Grais. He formed also four battalions of Canadian volunteers, efficiently officered, and organized as regular troops. The Indian allies were divided into three bands, each of which was placed under the command of a nobleman of rank, who had gained distinction in the European warfare of France. One was composed of the Sault and St. Louis bands, and of friendly Abenaquis; another consisted of the Hurons of Lorette and the mountaineers of the North; the third band was smaller and composed indiscriminately of warriors of different tribes, whom a spirit of adventure led to embark upon the expedition. They were chiefly Ottawas, Saukies, and Algonquins: and these the Baron de Bekancourt charged himself to conduct. This formidable armament was amply provisioned, and provided with all the munitions of war. Besides pikes, arquebusses, and other small arms then in use, they were furnished with grenades, a mortar to throw them, and a couple of field-pieces; which, with the tents and other camp equipage, were transported in large batteaux for this purpose. Nor was the energy of their movements unworthy of this brilliant preparation. Ascending the St. Lawrence and coasting the shores of Lake Ontario, they entered the Onondaga river, cut a military road around the falls, and carrying their transports over the portage, launched them anew and finally debouched with their whole flotilla upon the waters of Onondaga lake.

It must have been a gallant sight, to behold the warlike pageant floating beneath the primitive forest which then crowned the hills around that lovely water. To see the veterans who had served under Turenne, Vauban, and the great Conde, marshalled with pike and cuiras beside the half naked Huron and Abenaquis; while young cavaliers in the less warlike garb of the court of the magnificent Louis, moved with plume and mantle, amid the dusky files of wampum-decked Ottawas and Algonquins. Banners were there which had flown at Steenkirk and Landen; or rustled above the troopers that Luxemburgh's trumpets had guided to glory when Prince Waldeck's battalions were borne down

beneath his furious charge. Nor was the enemy that this gallant host were seeking unworthy of those whose swords had been tried in some of the most celebrated fields of Europe. "The Romans of America," as the Five Nations have been called by more than one writer, had proved themselves soldiers, not only by carrying their arms among the native tribes a thousand miles away, and striking their enemies alike upon the lakes of Mame, the mountains of Carolina, and the praries of the Missouri; but they had already bearded one European army beneath the walls of Quebec, and shut up another for weeks within the defences of Montreal, with the same courage that, half a century later, vanquished the battalions of Dieskau upon the banks of Lake George.

Our business, however, is not with the main movements of this army, which, we have already mentioned, were wholly unimportant in their results. The aged Chevalier de Frontenac was said to have other objects in view besides the political motives for the expedition, which he set forth to his master as the Grand Monarque.

Many years previous, when the Five Nations had invested the capital of New-France, and threatened the extermination of that thriving colony, a beautiful half-blood girl, whose education had been commenced under the immediate auspices of the governor-general, and in whom, indeed, M. de Frontenac was said to have a parental interest, was carried off, with other prisoners, by the retiring foe. Every effort had been made in vain during the occasional cessations of hostilities between the French and the Iroquois, to recover this child; and though, in the years that intervened, some wandering Jesuit from time to time averred that he had seen the Christian captive living as the contented wife of a young Mohawk warrior, yet the old nobleman seems never to have despaired of reclaiming his "nut-brown daughter." Indeed, the Chevalier must have been impelled by some such hope when, at the age of seventy, and so feeble that he was half the time carried in a litter, he ventured to encounter the perils of an American wilderness, and place himself at the head of the heterogeneous bands which now invaded the country of the Five Nations under his conduct.

Among the half-bred spies, border scouts, and mongrel adventurers that followed in the train of the invading army, was a renegade Fleming, of the name of Hanyost. This man, in early youth, had been made sergeant-major, when he deserted to the French ranks in Flanders. He had subsequently taken up a military grant in Canada, sold it after emigrating, then making his way down to the Dutch settlements on the Hudson, had become domicilated, as it were, among their allies, the Mohawks, and adopted the life of a hunter. Hanyost, hearing that his old friends, the French, were making such a formidable descent, did not hesitate to desert his more recent acquaintances; but offered his services as a guide to Count de Frontenac the moment he entered the hostile country. It was not, however, mere cupidity, or the habitual love of treachery, which actuated the base Fleming in this instance. Hanyost, in a difficulty with an Indian trapper, which had been referred for arbitrament to the young Mohawk chief Kiodego, (a settler of disputes,) whose cool courage and firmness fully entitled him to so distinguished a name, conceived himself aggrieved by the award which had been given against him. The scorn with which the arbitrator met his charge of unfairness, stung him to the soul, and fearing the arm of the powerful savage, he had nursed the revenge in secret, whose accomplishment seemed now at hand. Kiodago, ignorant of the hostile force which had

entered his country, was off his land at a fishing station, or summer camp, among the wild hills about Konnedieyu; [since corrupted into "Canada;" Beautiful Waters, probably so called, from its amber color: now Trenton Falls;] and, when Hanyost informed the commander of the French forces, that by surprising this party, his long-lost daughter, the wife of Kiodago, might be once more given to his arms, a small but efficient force was instantly detached from the main body of the army to strike the blow. And musketeers with sixty-five pikemen, led severally by the Baron de Bekancourt and the Chevalier de Grais, the former having the chief command of the expedition, were sent upon this duty, with Hanyost to guide them to the village of Kiodago. Many hours were consumed upon the march, as the soldiers were not yet habituated to the wilderness; but just before dawn on the second day, the party found themselves in the neighbourhood of the Indian village.

The place was wrapped in repose, and the two cavaliers trusted that the surprise would be so complete, that their commandant's daughter must certainly be taken. The Baron, after a careful examination of the hilly passes, determined to head the onslaught, while his companions in arms, with Hanyost, to mark out his prey, should pounce upon the chieftain's wife. This being arranged, their followers were warned not to injure the female captives while cutting their defenders to pieces, and then a moment being allowed for each man to take a last look at the condition of his arms, they were led to the attack.

The inhabitants of the fated village, secure in their isolated situation, aloof from the war-parties of that wild district, had neglected all precaution against surprise, and were buried in sleep, when the wizzing of a grenade, that terrible, but now superseded engine of destruction, roused them from their slumbers. The missile, to which a direction had been given that carried it in a direct line through the main row of wigwams, which formed the little street, went crashing among their frail frames of basket work, and kindled the dry mats stretched over them into instant flames. And then, as the startled warriors leaped all naked and unarmed from their blazing lodges, the French pikemen, waiting only for a volley from the musketeers, followed it up with a charge still more fatal. The wretched savages were slaughtered like sheep in the shambles. Some overwhelmed with dismay sank unresisting upon the ground, and covering up their heads after the Indian fashion when resigned to death, awaited the fatal stroke without a murmur; others, seized with a less benumbing panic, sought safety in flight, and rushed upon the pikes that lined the forest's paths around them. Many there were, however, who schooled to scenes as dreadful, acquitted themselves like warriors. Snatching their weapons from the greedy flames, they sprang with irresistible fury upon the bristling files of pikemen. Their heavy war-clubs beat down and splintered the fragile spears of the Europeans, whose coralets ruddy with the reflected fires 'mid which they fought, glittered back still brighter sparks from the hatchets of that which crashed against them. The fierce veteran pealed the charging cry of many a well-fought field in other climes; but wild and high the Indian whoop rose shrill above the din of conflict, until the hovering raven in mid air caught up and answered the discordant shriek.

De Grais, in the meantime, surveyed the scene of action with eager intentness, expecting each moment to see the paler features of the Christian caste among the dusky females who ever and anon sprang shrieking from the blazing lodges, and were instantly hurled backward

into the flames by fathers and brothers, who even thus would save them from the hands that vainly essayed to grasp their distracted forms. The Mohawks began now to wage a more successful resistance, and just when the fight was raging hottest, and the high-spirited Frenchman, beginning to despair of his prey, was about launching into the midst of it, he saw a tall warrior who had hitherto been forward in the conflict, disengage himself from the *melee*, and wheeling suddenly upon a soldier who had likewise separated from his party, brain him with a tomahawk, before he could make a movement in his defence. The quick eye of the young chevalier, too, caught a glance of another figure, in pursuit of whom, as she emerged with an infant in her arms, from a lodge on the farther side of the village, the luckless Frenchman had met his doom. It was the Christian captive, the wife of Kiodaga, beneath whose hand he had fallen. That chieftain now stood over the body of his victim, brandishing a war club which he had snatched from a dying Indian near. Quick as thought De Grais levelled a pistol at his head, when the track of the flying girl brought her directly in his line of sight, and he withheld his fire. Kiodaga, in the meantime, had been cut off from the rest of his people by the soldiers, who closed in upon the space which his terrible arm had a moment before kept open. A cry of agony escaped the high-souled savage, as he saw how thus the last hope was lost. He made a gesture, as if about to rush again into the fray, and sacrifice his life with his tribesmen; and then perceiving how futile must be the act, he turned on his heel, and bounded after his retreating wife, with arms outstretched, to shield her from the dropping shots of the enemy.

The uprising sun had now lighted up the scene, but all this passed so instantaneously that it was impossible for De Grais to keep his eye upon the fugitive amid the shifting forms that glanced continually before him; and when, accompanied by Hanyost and seven others, he had got fairly in pursuit, Kiodago, who still kept behind his wife, was far in advance of the Chevalier and his party. Her forest-training had made the Christian captive as fleet of foot as an Indian maiden. She heard too, the cheering voice of her loved warrior behind her, and pressing her infant in her arms, she urged her flight over crag and fell, and soon reached the head of a rocky pass, which it would take some moments for any but an American forester to scale. But the indefatigable Frenchmen are urging their way up the steep; the cry of pursuit grows nearer as they catch a sight of her husband through the thickets, and the agonized wife finds her forward progress prevented by a ledge of rock that impends above her. But now again Kiodaga is by her side; he has lifted his wife to the cliff above, and placed her infant in her arms; and already, with renewed activity, the Indian mother is speeding on to a cavern among the hills, well known as a fastness of safety.

Kiodaga looked a moment after her retreating figure, and then coolly swung himself to the ledge that commanded the pass. He might now easily have escaped his pursuers; but as he stepped back from the edge of the cliff, and looked down the narrow ravine, the vengeful spirit of the red man was too strong within him to allow such an opportunity of escape. His tomahawk and war club had been lost in the strife, but he still carried at his back a more efficient weapon in the hands of so keen a hunter. There were but three arrows in his quiver, and the Mohawk was determined to have the life of an enemy in exchange for each of them. His bow was strung quickly, but with as much coolness as if there were no exigency to require haste. Yet he had scarcely time to

throw himself upon his breast, a few yards from the brink of the declivity, before one of his pursuers, more active than the rest, exposed himself to the unerring archer. He came leaping along from rock to rock, and had nearly reached the head of the glen, when, pierced through and through by one of Kiodago's arrows, he toppled from the crags, and rolled, clutching the leaves in his death-agony, among the tangled furze below. A second met a similar fate, and a third victim would probably have been added, if a shot from the fusil of Hanyost, who sprang forward and caught sight of the Indian just as the first man fell, had not disabled the thumb-joint of the bold archer, even as he fixed his last arrow in the string. Resistance seemed now at an end, and Kiodaga again betook himself to flight. Yet anxious to divert the pursuit from his wife, the young chieftain pealed a yell of defiance, as he retreated in a different direction from that which she had taken. The whoop was answered by a simultaneous shout and rush on the part of the whites; but the Indian had not advanced far before he perceived that the pursuing party, now reduced to six, had divided, and that three only followed him. He had recognised the scout, Hanyost, among his enemies, and it was now apparent that that wily traitor, instead of being misled by his *ruse*, had guided the other three upon the direct trail to the cavern which the Christian captive had taken. Quick as thought the Mohawk acted upon the impression. Making a few steps within a thicket, still to mislead his present pursuers, he bounded across a mountain torrent, and then leaving his foot-marks pushed in the yielding bank, he turned shortly on a rock beyond, recrossed the stream, and concealed himself behind a fallen tree, while his pursuers passed within a few paces of his covert.

A broken hillock now only divided the chief from the point to which he had directed his wife by another route, and to which the remaining party, consisting of De Grais, Hanyost, and a French musketeer were hotly urging their way. The hunted warrior ground his teeth with rage when he heard the voice of the treacherous Fleming in the glen below him; and springing from crag to crag, he circled the rocky knoll, and planted his foot by the roots of a blasted oak that shot its limbs above the cavern, just as his wife had reached the spot, and pressing her babe to her bosom, sank exhausted among the flowers that waived in the moist breath of the cave. It chanced that at that very instant, De Grais and his followers had paused beneath the opposite side of the knoll, from whose broken surface the foot of the flying Indian had disengaged a stone, which crackling among the branches, found its way through a slight ravine into the glen below. The two Frenchmen stood in doubt for a moment. The musketeer pointing in the direction whence the stone had rolled, turned to receive the order of his officer. The Chevalier, who had made one step in advance of a broad rock between them, leaned upon it, pistol in hand, half turning toward his follower; while the scout, who stood farthest out from the steep bank, bending forward to discover the mouth of the cave, must have caught a glimpse of the sinking female, just as the shadowy form of her husband was displayed above her. God help thee now, bold archer! thy quiver is empty; thy game of life is nearly up; the sleuth-hound is upon thee; and thy scalp-lock, whose plumes now flutter in the breeze, will soon be twined in the fingers of the vengeful renegade. Thy wife——But hold! the noble savage has still one arrow left!

Disabled, as he thought himself, the Mohawk had not dropped his bow

in his flight. His last arrow was still griped in his bleeding fingers; and though his stiffening thumb forbore the use of it to the best advantage, the hand of Kiadago had not lost its power. The crisis which it takes so long to describe, had been realized by him in an instant. He saw how the Frenchmen, inexperienced in wood-craft, were at fault; he saw too, that the keen eye of Hanyost, had caught sight of the object of their pursuit, and that further flight was hopeless; while the scene of his burning village in the distance, inflamed him with hate and fury, toward the instrument of his misfortunes. Bracing one knee upon the flinty rock, while the muscles of the other swelled as if the whole energies of his body were collected in that single effort, Kiodago aims at the treacherous scout, and the twanging bow-string dismisses his last arrow upon its errand. The hand of the Spirit could alone have guided that shaft! But Waneyo smiles upon the brave warrior, and the arrow, while it rattles harmless against the cuiras of the French officer, glances toward the victim for whom it is intended, and quivers in the heart of Hanyost! The dying wretch grasped the sword-chain of the Chevalier, whose corslet clanged among the rocks, as the two went rolling down the glen together; and De Grais was not unwilling to abandon the pursuit when the musketeer, coming to his assistance, had disengaged him, bruised and bloody, from the embrace of the stiffening corpse.

What more is there to add. The bewildered Europeans rejoin ed their comrades, who were soon after on their march from the scene they had desolated; while Kiodago descended from his eyry to collect the fugitive survivors of his band, and, after burying the slain, to wreak a terrible vengeance upon their murderers; the most of whom were cut off by him before they joined the main body of the French army. The Count de Frontenac, returning to Canada, died soon afterward, and the existence of his half-blood daughter was soon forgotten. And—though among the dozen old families in the State of New-York who have Indian blood in their veins, many trace their descent from the offspring of the noble Kiodago and his Christian wife, yet the hand of genius, as displayed in the admirable picture of *Chapman* and *Adams*, has alone rescued from oblivion the thrilling scene of the Mohawk's LAST ARROW!

[*American Family Magazine.*

NECROPOLIS, THE CITY OF THE DEAD.

There is a Lake, that to the north
Of Memphis stretches grandly forth,
Upon whose silent shore the Dead
Have a proud city of their own,*
With shrines and pyramids o'erspread,—
Where many an ancient kingly head
Slumbers, immortaliz'd in stone;
And where, through marble grots beneath,
The lifeless, rang'd like sacred things,
Nor wanting aught of life but breath,
Lie in their painted coverings,
And on each new successive race,
That visit their dim haunts below,
Look with the same unwitheriug face,
They wore three thousand years ago.
There, Silence, thoughtful god, who loves
The neighbourhood of death, in groves
Of asphodel lies hid, and weaves
His hushing spell among the leaves,—
Nor ever noise disturbs the air,
Save the low, humming, mournful sound
Of priests, within their shrines, at prayer
For the fresh Dead entomb'd around.

ALCIPHRON.

* Necropolis, or the City of the Dead, to the South of Memphis.

SULTAN MAHMOUD'S LAST EXCURSION UPON THE BOSPHORUS.

BY PRINCE PUCKLER MUSKAU.

I HAD travelled over a considerable part of Asia Minor, and had every where perceived marks of the beneficent action of a superior man. Every where complete security prevailed, even in the remote mountainous districts, where, some few years before, assassinations and robberies were daily occurrences. Fanaticism was crushed; it had vanished almost every where; and where it still existed it ventured not into the open light.

Thus I was myself at Broussa, the object of a toleration hitherto unheard of among the Mahometans. It is well known that on entering a mosque they leave even their slippers at the door, and that they hold dogs in religious horror. Now, on arriving at Broussa, I hastened to visit the mosque and the tomb of Mouhrad I., situate in a distant part of the suburbs. I presented myself there in the costume of a traveller and horseman—that is to say, with large boots and spurs, and I was accompanied by my dog. When the mosquekeeper made his appearance no other Turk was present, wherefore I begged him to dispense with taking my boots off. He granted my request, and when my dog was suddenly attacked by a host of those wild dogs, which in Turkey are the scourge of travellers, the keeper allowed me to give my poor companion a shelter in the mosque against his persecutors.

In all Anatonia I found the Rayas and strangers enjoyed greater protection than the Turks themselves, especially the Greeks, several of whom, who had formerly migrated to the Morea, had since returned to those countries. The governors of those provinces and towns, though most of them at the same time farmers-general, according to the old Turkish system, were so closely and securely watched that a complaint was very seldom made against them. I at the same time observed that the inhabitants always preferred new governors, recently sent from Constantinople, to the old ones, born in the country, and belonging to its most influential families. Considerable buildings, undertaken by the Government or private individuals, bore witness, in all the towns, to the progress of civilization, and the cultivation of the soil itself was as much improved as the restricted numbers of the population permitted, and presented the most smiling aspect. Every where I met with the most liberal hospitality, and, in my capacity as a traveller, I was gladdened with an accelerated, exact, and cheap posting service. I only condemned the deplorable state of the roads, upon which, however, I found some attention bestowed as I approached Constantinople.

Filled with these impressions, I arrived in the Ottoman capital, anxious to become personally acquainted with the man to whose impulse results so difficult to obtain and so beneficent were due.

Already, during the first week of my stay, an audience had been granted to me on the part of the Sultan; but it was postponed, and soon rendered impossible. The disease with which he was attacked, made, in a short time, deplorable progress. The news of his death was received by all subjects of the empire, whether Turks or Christians, and whatever were their opinions, with a sorrow that I had never witnessed any where

else. I myself shared in the common sadness, for although the much desired opportunity of conversing with so remarkable a man had vanished, chance had enabled me to observe him for some time very closely, and that first and last encounter had made the deepest and most lasting impression upon me. Now, one must have seen a man once at least to regret him really and deeply. I will, therefore, briefly tell how I met the Sultan, and what he appeared to me, who, I own, am somewhat enthusiastic.

One day I was boating upon the channel of that brilliant Bosphorus, which, decked out every day as it were for a *fete*, reflects in the mirror of its blue surface its mosques, minarets, and innumerable palaces, its gardens and villas, its delightful groups of plane trees, its cemeteries with dark cypresses, and its shaded hills resembling waves. A noise of cannon from the forts and ships suddenly warned me of the approach of the Sultan's barge. I hastened towards a spot of the Asiatic shore where the presence of some troops and of a few foreign spectators denoted the place selected by the Sultan for his day's prayer.

I had scarcely landed, and obtained from the courtesy of a Turkish officer one of the best places close to the mosque stairs, when the Grand Seignor's boat, rowed with the swiftness of bird-flight, touched the shore. At that period the public knew but vaguely of the disease which so promptly devoured him, and, after all I had heard about Sultan Mahmoud, I expected to behold a vigorous stature and a proud look. I was astonished when I saw a being bent, resembling a spectre, whose features, though handsome and noble, were already struck with the marks of an incurable illness. There was a benevolence and mildness in his large and expressive eyes; but the approach of death had already imparted to them something supernatural; he seemed a stranger to all that passed around him, and to be wholly plunged into the interior of his soul.

That Prince, the image of expiring grandeur, was seated upon several red velvet cushions under a gilt canopy, forming a sad contrast with the herculean rowers, whose athletic forms shone beneath their shirts of transparent silk. The dying sovereign attempted to rise, but he fell strengthless upon the cushions, and two officers rather carried than conducted him up the stairs. Whilst the Sultan addressed some affectionate words to the persons surrounding him, a painful smile passed over his suffering face, which to conceal the vestiges of his illness, was painted red and black, according to the Paris etiquette, but shaded by an ebony beard, cut very short. Those borrowed colors did but more sadly bring out the signs betokening an approaching decomposition.

I was so dismayed at that aspect, so sorrowfully absorbed in the fate of that martyr—for he is a martyr that devotes his life to an idea disowned by the mass of the people—that I let the Sultan pass without saluting him, and taking my hat off, like the rest. The Sultan's eyes fixed upon me; perhaps he had perceived and taken offence at my unpoliteness; but could he have read my soul, he would have recognised in it a more flattering homage than any that a skilful courtier could have tendered; for, in verity, it was very long since the sight of a sovereign had transported me so far as to make me forget myself.

We were not permitted to follow the Sultan into the mosque, and when he left it I was myself again; I failed not to repair my fault with a profound salute, after taking my hat off long before he re-appeared. He wanted to return to his palace in a carriage, and, after descending the

stairs with great pains, he stopped at the door to rest himself before he entered the vehicle. During that pause he attentively looked at the crowd surrounding him. A poor woman kept her hand up with a petition; the Sultan remarked her; he immediately desired his suite to fetch the memorial, and carefully deposited it in his carriage. Fearing lest the ladies standing among the spectators might be touched by his spirited horses, he had them requested to draw back a little to a higher spot.

In the meantime I had not ceased to study his interesting countenance with all the attention of a physiognomist. Melancholy, richness of thought, perhaps more of the ideal than of fixed will, a great sensitiveness to pleasure and pain, goodness and frankness—such were the principal features I fancied I read in it; but all that was, as it were, veiled with the presentiment of death. That was his last excursion, and it is well known that he devoted his last days to acts of piety and benevolence. History will be just towards him, and will, doubtless, assign to him one of the most distinguished places among the most influential men of his times, and the greatest sovereigns of his dynasty; for there are glorious individualities at the decline as well as at the rise of nations. It was not the fault of Mahmoud if he came too late—it was not his fault if he did not accomplish what he projected. Like Mehemet Ali, Sultan Mahmoud was reduced to himself in the prosecution of his plans, and it was but to his own intelligence that he was indebted for what he created and executed amidst unspeakable obstacles. How did Europe support and encourage him in his labours? To answer the question I might but mention Greece and Navarino. I might also mention some acts of diplomacy in Egypt, but, above all, those club-blows he had to suffer, the pin-pricks given to him by that same diplomacy, with its undecisive and incomplete intervention, with its mania of meddling with every detail of his administration, and with the pretension of imposing upon him at every moment its guardianship.

It is said that, a few days previous to his death, the Sultan assembled the most important and influential of his ministers, and addressed them a sort of farewell speech, in which he explained himself upon all those points with dignity and severity. He conducted that address in an affecting manner, solemnly declaring that, on the point of appearing before his Creator and Supreme Judge, he felt a perfect accordance between his policy and his conscience; that he had followed the advice of his predecessor, Selim, and done from his own conviction what he had deemed most suitable to the salvation of his people, and indispensable to the maintenance of the empire; that he, therefore, prayed all those who heard him to follow his example, wishing that many of them, when their last hour struck, might be as free from remorse for having obstructed the reforms, as he felt at the moment for having led his people in that direction even by the employment of force. *Spirit of the Times.*

THE PLUNDERED HEIRESS.

A HINT TO LADY VISITORS OF FOREIGN WATERING PLACES.

BADEN-BADEN is, as all the world knows, a very popular resort for people who fancy themselves out of sorts, and think that the use of the waters will restore them to health; for people who are haunted by *ennui*, and think that the spirit may be laid by the dissipation of the place; and also, by another class of people, whose motives for a residence there are less praiseworthy—we mean Knights of Industry! And, certainly, if indefatigable attention to their particular calling alone constituted a claim to our admiration, we should say that none deserve it more than the chevaliers to whome we have alluded. But a circumstance occurred at that place during the past summer which has given us infinite pain, and we are bound to add that the conduct of some of the parties concerned was of so bad a character, that it calls for the deepest reprehension of every one not lost to all sense of honorable feelings. The following are the particulars of the case.

Mr. and Mrs. ——, accompanied by their ward Miss F——, left Paris for the baths of Baden-Baden. The young lady is heiress to a large property—will shortly be of age—is reported to be very amiable and accomplished—and is, *we know*, remarkably beautiful. It is too notorious to be denied, that ladies, whilst residing at the baths, do not hesitate to lay out their money at the tables; that is, without any circumlocution, ladies of the highest distinction frequent the public gaming-tables, losing or winning, as the case may be, large sums of money in the same open and undisguised manner as the men. If this practice were restricted to the risk of a Napoleon occasionally, no great harm might accrue,—it might be considered much in the same light as a raffle here. But it not unfrequently happens that such serious amounts are staked, that moral and pecuniary ruin are alike the result. Miss F——, with others, was accustomed to stake trifling sums, without any interference on the part of her guardians, and she was particularly successful. The consequence was that the young lady soon became a constant attendant at the tables; her whole soul was devoted to *Rouge et Noir*. Instead of remonstrating with her, the dishonourable guardians of Miss F—— rather encouraged the propensity. But this was not all—they had private parties in their own apartments; these parties were wholly devoted to gaming, and we believe French hazard was the game played. It was remarked that Mr. and Mrs. —— never engaged in any contest with their ward: her almost constant opponent was a French Countess. Miss F—— lost immense sums! Her ample allowance was exhausted. Will it be believed that Mr. —— did not hesitate to advance large sums from his private purse, to enable his ward to pursue this fatal propensity! Even his funds were at last exhausted, or he pretended that such was the case. Still he did not interfere! The play continued, Miss F—— giving bills, payable when she came of age, for the amount of her losses. It is evident that the parties had perfect confidence in Miss F——'s honorable intentions, as the bills could not legally be recovered: but why they took bills at all, instead of the usual acknowledgments, seems very mysterious. It was whispered that the play was unfair, and that the parties concerned ob-

tained the bills as a means of annoyance, should the fact be suspected by the young lady, and she should in consequence refuse payment.

It fortunately happened for Miss F—— that some of the bills were sent to London to be negociated, one of which fell into the hands of the other guardian of the lady. This gentleman's conduct was at once prompt, business-like, and honorable; he discounted the bills in London, went directly to Baden-Baden, took away the lady, having previously, by threats of exposure, obtained the remaining bills from the French Countess; and it is said that he intends to contest the payment of the sums due to his brother guardian. The lady is with him in a western county; and it is to be hoped that the present severe lesson has not been lost upon her.

Court Journal, Dec. 15.

TRANSFERENCE OF VITAL POWER.

A not uncommon cause of loss of vital powers is the young sleeping with the aged. This fact, however explained, has been long remarked, and it is well known to every unprejudiced observer. But it has been most unaccountably overlooked in medicine. I have, on several occasions, met with the counterpart of the following case: I was, a few years since, consulted about a pale, sickly, and thin boy, of about five or six years of age. He appeared to have no specific ailment, but there was a slow and remarkable decline of flesh and strength, and of the energy of all the functions—what his mother very aptly termed, a gradual blight. After inquiring into the history of the case, it came out that he had been a robust and plethoric child up to his third year, when his grandmother, a very aged person, took him to sleep with her; that he soon afterwards lost his good looks; and he had continued to decline ever since, notwithstanding medicinal treatment. I directed him to sleep apart from his aged parent, and prescribed tonics, change of air, &c. The recovery was rapid. It is not with children only that debility is induced by this mode of abstracting vital power. Young females, married to very old men suffer in a similar manner, though not to the same extent. These facts are often well known to the aged themselves, who consider the indulgence favorable to longevity, and therefore, often illustrate the selfishness which, in some persons, increases with their years.

Dr. Copland's Dictionary.

LITERARY NOTICES.

THE LADIES' FLOWER GARDEN OF ORNAMENTAL ANNUALS. By Mrs. LOUDON.

THIS work will prove a great acquisition, not only to the ladies, but to all who are fond of the flower garden. From the ease with which they are raised, and the short time they require, annuals have a decided advantage over perennials and bulbs, which can only be grown when there is certainty of remaining some time. They are, therefore, favorites in the flower garden, and deservedly so, for all their beauties can be enjoyed the same season that the seeds are sown. Unfortunately, however, a large number of those met with in our gardens are unworthy of culture, and ought to have been superseded, long since, by those of more recent introduction and greater beauty. A want of information has, no doubt, retarded this desirable change, and the old flowers have kept their places because the newer species were unknown.

In this work, Mrs. Loudon proposes to supply the deficiency, and to give us a selection of the best kinds which may be deemed worthy of culture in the flower garden. In her introduction, she observes, "I shall endeavour to comprise in it, all the ornamental annuals, that the best judges, whom I have consulted on the subject, think really deserving of culture in a flower garden; and as my descriptions will be illustrated by plates, by an able artist, lithographed and coloured from nature, the grower of annuals, by turning over this volume, may select those which appear the most suitable for his particular purpose." Each number contains three plates, on which are grouped a number of flowers well drawn, and those which we are acquainted with, are coloured to the very life. From fifteen to twenty pages of letter-press accompany them, in which are given first the Botanic and English names, and next the Synonomes, to which are added the botanical character, a popular description, "with the geography, history, properties and uses, culture, and in short, every thing worth knowing of the plant." The directions for the culture of each flower, are full and good, and we commend the work to all amateurs.

To be had at J. P. Beile's book-store, King-street, Charleston.

AUDUBON'S BIRDS OF AMERICA. We have now an opportunity of forming some idea of the plan, execution, and general merits of this work. The second number, which has just been received, contains descriptions of those species of hawks called Buzzards, and is a beautiful specimen of lithographic engraving, which is now brought to great perfection.

The first plate in this number represents the common Buzzard in the act of pouncing on the marsh-hare, who seems to have lost all power of volition,

from the dread of the ruthless enemy who is about to seize him in his talons. It is a spirited drawing, and an exact miniature of the splendid plate which we have so often admired in his large and magnificent work. The next is the Red-tailed Hawk, grasping in his talons a high-land Rabbit, which he seems determined not to relinquish to an individual of his own species, who is endeavouring to deprive him of it. The Black-hawk of Louisiana, and the broad winged hawk of the North, take up the remainder of the number, and are all exact miniatures of the plates in the large work. The colouring of this number is superior to the first, and as the publication progresses, every number will unfold new beauties.

The industry and perseverance of Audubon, in collecting the materials for its completion, renders this, the most valuable work on Ornithology which has ever been offered to the public; and our knowledge of that science cannot fail to be improved by it. To form some idea of the labour and expense incurred in collecting the materials for its publication, it will only be necessary to know, that he has brought together for our amusement and instruction the feathered inhabitants of the barren and rocky coasts of Labrador, the swamps of Florida, the prairies of the West, and even those of the Rocky Mountains, California, and the shores of the Pacific.

The numbers already published, afford us a sample of what we may hereafter expect. Out of ten species accurately figured and described, five were unknown to all our former naturalists. Wilson made four species of the red tailed and red shouldered hawk, having mistaken the young of those birds for adults of other species. We conceive it therefore, impossible, to gain an accurate knowledge of the Birds of America, without the aid of Audubon's work, and with his correct and beautiful drawings, and simple but scientific descriptions, any one who is able to read our language may become an ornithologist. Of the close observation and happy talent for describing the habits of the lively tenants of our fields and groves, the following extract from his account of the red tailed Hawk will show that he has spent much of his time in studying from the book of nature which is inexhaustible, and bountifully spread out to all who have a relish for its simple truths.

"As soon as the little King-bird has raised its brood, and when its courage is no longer put in requisition for the defence of its young, or its mate, the red tailed hawk visits the farm-houses to pay his regard to the poultry. This is done without much precaution, for while sailing over the yard where the chickens, the ducklings and the young turkeys are, the hawk plunges upon any one of them, and sweeps it off to the nearest wood. When impelled by continued hunger, he now and then manages to elude the vigilance of the martins, swallows, and king-birds, and watching for a good opportunity, falls upon and seizes an old fowl, the dying screams of which are heard by the farmer at the plough, who swears vengeance against the robber. He remembers that he had observed the hawk's nest in the woods, and full of anger at the recollection of the depre-

dations which the plunderer has already committed, and at the anticipation of its many visits during the winter, leaves his work and his horses, strides to his house, and with an axe proceeds towards the tree, where the hopes of the red tailed hawk are snugly nestled away among the tall branches. The farmer arrives, eyes the gigantic tree, thinks for a moment of the labour which will be required for felling it, but resolves that he shall not be overreached by a hawk. He throws aside his hat, rolls up his sleeves, and applies himself to the work. His brawny arms give such an impulse to the axe, that at every stroke, chips are seen to fall on all sides. The poor mother-bird, well aware of the result, sails sorrowfully over and around. She would fain beg for mercy towards her young. She alights on the edge of the nest, and would urge her offspring to take flight. But the farmer has watched her motions. The axe is left sticking in the core of the tree, his rifle is raised to his shoulder in an instant, and the next moment the whizzing ball has pierced the heart of the red tailed hawk, which falls unheeded to the earth. The farmer renews his work, and now changes sides. A whole hour has been spent in the application of ceaseless blows. He begins to look upwards, to judge which way the giant of the forest will fall; and having ascertained this, he redoubles his blows. The huge oak begins to tremble. Were it permitted to speak, it might ask why it should suffer for the deeds of another; but it is now seen slowly to incline, and soon after the awful rustling produced by its broad arms, its branches, twigs and leaves, passing like lightning through the air, the noble tree falls to the earth, and almost causes it to shake. The work of revenge is now accomplished the farmer seizes the younglings, and carries them home, to be tormented by his children, until death terminates their brief career."

THE DRAMA.

For the Southern Cabinet.

THE *New Theatre* has brought out this season a galaxy of the brightest stars. In comedy, we have had Latham, Burton, the Barnes, and our own domestic favorite, Fuller. The opera has been most brilliantly sustained, both in scenic and musical effect, by Miss Shirreff and Wilson, Madame Otto, Brough and Jones; while in tragedy, C. Kean has just closed an engagement, which has added to his professional reputation, as it has done to the profits of the Manager. With such a disposition to please as Mr. Abbott has evinced, he cannot fail to render his Theatre attractive.

We cannot congratulate him too much for his introduction of the opera amongst us. The improvement it has already imparted to the musical talent of our city is obvious. Teachers, pupils, and every one

have caught a fresh, and healthy taste, and it is now no uncommon thing to hear the domestic circle enlivened with the finished compositions of such men as Rossini, Mozart, Bellini, Auber, and the other great masters, whose names before were scarcely known to us. Of all the departments of the drama, the opera is, perhaps, the most lastingly improving to an audience—attaching itself to all the sweetest harmonies of our nature, its associations are carried with us through life, and rarely, if ever, fail to lend a softening influence to all the sentiments of the heart. We trust that Mr. Abbott will continue to maintain it, with the same zeal he has already manifested. Success must always attend the effort.

While we write this, Mrs. Fitzwilliam is fulfilling an engagement to crowded houses. Since the performances of Clara Fisher, our Charleston public have enjoyed no actress who has at all approached this lady in her peculiar line. She is indeed an "actress of all work," and the perfect ease with which she enters into the life of the various characters she assumes, is incredible, except to those who see and hear with their own eyes and ears.

After this lady, Mr. Abbott, we understand, is to grace his boards with attractions not less worthy than those we have already mentioned—and his endeavour will be to continue to the end of the season, that variety, which so essentially makes up the spice of life. He can scarcely fail to do so. His stock company is generally good—and he (we wish he would appear oftener) a host in himself. In private life, the perfect gentleman and man of taste, he never fails to maintain the same characteristics in his professional personations. May the New Theatre long continue to prosper under his management.

SPORTING INTELLIGENCE.

For the Southern Cabinet.

The annual races over the Washington Course, near this city, commenced on Monday, the 17th February, and continued throughout the week. The sweepstakes, 2 mile heats, for colts and fillies 3 years old, was won by Col. Singleton's imported br. f. "*Helen*," by Priam, out of Malibran, beating Mr. Edmondson's ch. f. Mary-Elizabeth, by Andrew: dam by old Gallatin—and Mr. Richardson's ch. f. Amy, by Nonplus—dam by Comet, in three heats—Mary-Elizabeth winning the first heat, and Helen the two last. Time of the first heat, 4. 9.—second heat, 3. 46.—third heat, 3. 57. It was thought by the knowing ones, that although Helen, and Mary-Elizabeth were both in condition to make a fine race, yet in all probability Mr. Richardson's filly would have proved rather troublesome in the race, if she had not been suffering from a split hoof, and had been unable to take her regular exercise for some time previous. The Citizens Purse of 3 mile heats, was won in good style by Mr. Hammond's gr. m. "*Omega*," beating the celebrated Eclipse colt Gano, Jeanette Berkley, Meridian, Lilly and Zoraida, in 5. 56. and 5. 52.

Hammond, the renowned trainer of Bascombe, in his great matches with Argyle and Post-Boy, was remarkably successful at the present meeting: besides the Citizens purse, he won the Jockey Club Purse of

4 mile heats with his ch. h. Gerow, by Henry—and the Jockey Club Purse of 3 mile heats with his ch. f. Zenobia, by imported Roman—every race he entered for.

Mr. Walton's b. c. *Gano*, by Eclipse, won with much ease the Jockey Club Purse of 2 mile heats in 3. 53. and 4. 03.

The Handicap Race, which concluded the sports of the week, was won in 2 heats by Mr. Sinkler's ch. m. *Jaenette Berkeley*, 5 years, by Bertrand, jr., out of Carolina, by Buzzard—handicapped to carry 100 lbs., although she actually carried 102 lbs., beating Zoraida, carrying 85 lbs.—Mary-Elizabeth 84 lbs.—imported Helen, 87 lbs.—and Meridian, 85 lbs. The time made was excellent—5. 54.—5. 56½.

Mr. Legare's ch. f. *Cava*, 3 years, by Bertrand, out of Betsey Eccles, distinguished herself during the week by two very promising races—she is a good sized speedy mare: from the evidence she has given this season of her speed, combined with stoutness, having also a good disposition, fine health, and being easily trained, possessing in short, all those properties so essential to the high mettled racer, she promises to become a formidable competitor as a 4 miler next season. We understand this filly can now be obtained at a comparatively moderate price. Any one desiring to make up a stable for the spring or fall, and to add to their string of good ones, would do well to procure her at once, before her performances hereafter, induce her present owner to hold her at too high a figure.

GAME.

The markets of Charleston have been as abundantly supplied with game during the past season as in former years.

Deer.—This fine animal, which, in all newly settled countries, is food for thousands, and the pursuit of which affords exercise and amusement to the inhabitants of Carolina—teaching our young men the use of the horse and the gun, and preserving them from other temptations which lead to dissipation—appears in some parts of our lower country to be on the increase, although it is fast diminishing in the more thickly settled districts of the upper country. Our large tracts of pine barren, and our interminable swamps, subject to be frequently overflowed, and our islands along our coast will, for many years, serve as a harbor for deer. Thousands are annually slaughtered, but still they are so prolific, that the race has been preserved. In our markets, we one morning counted twelve exposed for sale, and frequently five or six. In a neighborhood not twenty miles from Charleston, the number of deer started by a party in the course of a day's hunt, usually amounts to between twelve and twenty-five. We would suggest to our sportsmen to have, at this season, some regard to the game laws established by our ancestors, and more rigidly adhered to by them than we are in the habit of doing. The bucks have just dropped their horns, and are quite lean, and the does will have young in a couple of months. We examined three deer killed a few days ago, and two of them would have had two fawns each, and the other three. Thus the obtaining of three lean deer was the destruction of ten.

Turkeys.—This fine bird, which we regard as the most delicious of any of the feathered tribe, is certainly diminishing in our country—it being now easier to kill a deer than a wild turkey. Nevertheless, our markets have been tolerably well supplied with it during the winter. Many are taken in traps.

AGRICULTURAL ITEMS.

A Sale of Imported Stock was made by Messrs. Elliott, Condy & Dawes, on the 13th inst. The horses brought from $350 to $405. A fine colt (Scout) was sold for $600. Two Durham cows (the only ones offered,) $190 and $200. The Ayreshire bulls and cows ranged from $45 to $96. This was the first large importation of the Ayreshire breed of cattle. Those we saw were young, and much smaller than our native stock, but many of them were beautifully formed, and will no doubt prove an acquisition to our State. From their fine milking properties they have acquired the name in Scotland of the "Poor man's Cow."

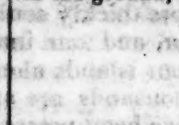
New Agricultural Implements.—Two very important instruments have been recently introduced,—the first is a "Machine for Husking and Shelling Corn." The other is for "Ditching and Banking." The first, although new to us, yet has been in operation for some time in Maryland, where it is said to give ample satisfaction. A writer in the American Farmer states that many farmers on the Eastern Shore have husked and shelled their corn "at the rate of 40 bushels of shelled corn per hour, and of 100 bushels per hour of corn previously husked." To those who grow corn in large quantities for sale, this must prove a very great acquisition. It is invented by Mr. Hussey, who also has invented a Reeping Machine, and is for sale in Baltimore, by R. B. Chenoweth, at $35.

The *Machine for Ditching and Banking* is "worked by one horse and a man and boy. The work done by it is beautifully and mathematically exact. The machine is calculated to be most valuable in the prairies of the West, as it is designed to drain and enclose at the same time. The farmer may open one ditch, depositing the earth close along the line of it, or if he pleases he can make two ditches, (not at the same operation) embanking the earth between the two. In conclusion of his description, the inventor observes. The above machine, when in complete operation, will cut and finish in soft alluvial soil twenty inches per minute, or in hard clay soil, from ten to twelve per minute a ditch of the following dimensions: three to four feet wide at top, eighteen inches at bottom, and three feet deep." The Editor of the American Farmer, from whom we gather the above, promises further information on the subject.

Milch Cows.—These animals should always, if possible, be kept where they can have free access to good water, whether ranging in the pasture or confined in the barnyard. From experience, we hesitate not to say, that having water always at hand will make a difference of 25 per cent. in favor of their yield. In winter no man should pretend to keep a cow to the pail who does not provide her twice a day with either good rich slops, pumpkins or roots. How in the name of St. George can it be expected that a cow fed upon dry hay, fodder or tops, from November till April, can secrete any considerable quantity of milk; we know that there is a large quantity of nutritive matter in each of these kinds of provender; but to replenish the udder, it is necessary that some such liquids or succulent pabulum named, be daily given. No one should keep a cow to the pail who does not keep her well; humanity as well as true economy are both consulted in so doing.

Strawberries.—A writer in the New-England Farmer, states that one of his neighbors in Dedham, (Mass.,) has received from the sale of strawberries the present year, an amount that would be equal to $1,200 an acre. The ground cultivated, measured ten rods, has a southern aspect, and is of ordinary quality. This plat was planted with the Methvin Castle four years since, has been well taken care of, and is now well covered with vines. From June 18th to July 19th, were sold strawberries to the amount of $77. The quantity gathered during this period, weighed 258 lbs. and measured 8 bushels and 3 pecks. The amount of expense for labor, manure, and sending to market, was $6 44.

A Useful Hint.—I am persuaded that many farmers feel fully convinced of the *truth* of many valuable reports which come from the experienced and scientific agriculturist, but which are often of very little benefit from the difficulty of making experiments upon their own farm. I beg leave to suggest a very simple plan that will bring what may be dubious to a matter of fact, with very little trouble, and at a trifling expense. Take 23 yards of common twine, tie a stake of about 16 inches long, (sharpened at one end to enter the ground) in the middle of the twine—then place two other stakes, each at 11 yards from the centre one. Now place the three stakes in the ground, as represented below:



Mark the outside of the two lines with a spade or hoe, then take up No. 2 and place it at No. 4, and mark the two lines as before, and you have 11 yards square (121 sq. yds.)—the 4th part of an acre. This mode will test an experiment as well as 11 acres—8 bushels of manure applied, will be at the rate of 320 bushels per acre, 10 bushels at 400 bushels per acre, &c. Such patches, on repeated trials, will afford evident proof of the *utility* and *proper quantity* required to an acre of lime, marl, plaster, bone dust, &c. as manures or different plants; and by arranging the plants at different distances, you will find the best mode of *planting* or *sowing*.

American Farmer.

MISCELLANEOUS ITEMS.

Substitution of Paper for Metallic Plates in the Daguerreotype.—A new application has been made of the effects of the Daguerreotype, by M. Bayard, a clerk of the French Finance Department. By the means of a chemical process he has succeeded in fixing the impressions of the camera obscura upon paper. The number of drawings thus obtained by him is very considerable, and among them there are about twenty which present great perfection. If the outlines of objects are not so clear in the impressions taken on paper as in those obtained upon the metallic plates, they have a softness in their general effect, which is highly pleasing to the eye. Moreover, the paper, which may receive any color, has not the inconvenience of the mirage which attends the silver-gilt plates. The section of the fine arts of the Royal Institute, to whom M. Bayard has submitted the drawings he has obtained, have been struck with the extraordinary delicacy with which the objects are reproduced upon the paper; and a most favorable report, drawn upon this new application of the Daguerreotype, by M. Raoul Rochetta, will be shortly published in the Moniteur.—*Paris paper.*

A Transparent Watch.—A watch has been presented to the Academy of Science at Paris, constructed of very curious materials, the parts being principally formed of rock crystal. It was made by M. Robellier, and is small in size. The internal works are visible; the two toothed wheels which carry the hands are rock crystal, the hands are rock crystal, the other wheels of metal, to prevent accidents from the breaking of the springs. All the screws are fixed in crystal, and all the axles turn on the rubies. The escapement is of sapphire, the balance wheel of rock crystal, and its springs of gold. The regularity of this watch, as a time-keeper, is attributed by the maker to the feeble expansion of the rock crystal on the balance wheel, &c. The execution of the whole shews to what a state of perfection the art of cutting precious stones has been carried on in modern times.

Electricity in Tic Doloureux.—M. Magenrie has obtained the happiest results from the application of electricity in affections of the senses, particularly in that acute disease termed tic doloureux. He causes the electric current to pass over the nerves by means of needles of platina, placed at greater or less intervals. In some instances a single application is said to have been sufficient; and, in one case of dreadful suffering, in which the patient had been forced, from the pain of speaking to express his desire by writing, six applications to the nerve entirely removed a malady of three years' duration.

When Mr. Livingston, the American Minister, who was a little daaf, was introduced to the Court of Napoleon, he had prepared to answer regarding his passage across the Atlantic. Napoleon accosted him thus: "How is Mr. Jefferson?" "Very boistorous! very boisterous!" replied Mr. Livingston, to the great amusement of those present.

Mile.—The following exhibit of the number of yards contained in a mile in different countries, will often prove a matter of useful reference to the readers of the Cultivator.

Mile in England or America,	1760 yds.
" Russia,	1100 "
" Italy,	1467 "
" Scotland and Ireland,	2200 "
" Poland,	4400 "
" Spain,	5028 "
" Germany,	5866 "
" Sweden and Denmark,	7233 "
" Hungary,	8800 "
League in England or America,	5820 "

Public Lands of the United States.—In a late speech, Mr. Benton presents the following recapitulations:

Purchase of Louisiana,	$15,000,000
Interest paid thereon,	8,329,353
Purchase of Florida,	5,000,000
Interest thereon,	1,480,000
Paid to Georgia,	1,250,000
Same purchase in Mississippi Stock,	1,832,000
Extinguishing Indian Titles,	72,000,000
Survey of Public Lands,	3,250,000
Salaries and expenditures in the General Land Office,	1,250,000
Land Offices and Officers,	3,300,000
	$112,691,353

The amount received from the Public Lands is stated at *one hundred and four millions*, leaving a deficiency of eight millions.

The amount of debt extinguished since the adoption of the Constitution, from moneys received (after defraying the expenses of collection) is thus stated:

For principal and interest of the public debt,	$421,496,000
Receipts from customs,	731,285,000
Receipts from lands,	104,000,000
Purchase of lands,	112,000,000

The Great Lord Thurlow.—Lord Thurlow had received a strong recommendatory letter of a young gentleman for a living in his Lordship's gift. He did not much like the recommender; but, acting impartially, said to his secretary, with whose attendance he rarely dispensed, 'Show him in!" The gay candidate for preferment put himself through the door, delicately dressed, and redolent of what was then considered a beautiful perfume, "lavender water." Thurlow looked at him for a minute, and then said to the secretary, "show him out!"—*New Mon. Mag.*

Gibbon and Sheridan.—Before my departure from England, says Gibbon, I was present at the august spectacle of the trial of Hastings, in Westminster Hall. It is not my-

province to absolve or condemn the Governor of India; but Mr. Sheridan's eloquence demanded my applause, nor could I hear without emotion, the personal compliments which he paid in the presence of the British nation. On being asked by a brother Whig, at the conclusion of the speech, how he came to compliment Gibbon with the epithet "luminous," Sheridan answered in a half whisper, "I said voluminous."

The Abuse of Time.—The following beautiful extract, is from a lecture delivered before the New-York Mercantile Library Association, in March, 1839, by the Rev. George W. Bethune:

"During a recent visit to the United States' mint, I observed in the gold room, a rack was placed over the floor for us to tread upon, and on inquiring its purpose, I was answered, it was to prevent the visitor from carrying away with the dust of his feet the minutest particles of the precious metal which despite of the utmost care, would fall upon the floor when the rougher edge of the bar was filed; and that the sweepings of the building saved thousands of dollars in the year. How much more precious the most minute fragments of time! and yet how often are they trodden upon like dust, by thoughtlessness and folly?"

Smoky Chimnies.—It has been clearly demonstrated by science and practical experiment, that this great drawback upon domestic comfort is remedied by an unerring and simple process, viz: a slight but continued enlargement, commencing at the bottom of the flue, and extending to the top. This is sure to produce a draft, and it is presumed that in most instances of defective chimneys, an inattention to this simple rule, in the original construction would be found the cause of the evil.—*Niagara Dem.*

Extraordinary Munificence.—The Lowell Institute in Boston was established by a legacy of near $300,000 in the will of the late Mr. Lowell, the interest of which is to be annually expended in free public lectures. Professor Silliman has been engaged for five years, to lecture, at a salary of $2000. It is said that upwards of 16,000 persons attended the 340 different literary lectures in Boston last year, at a cost of $12,000.

Domestic Life.—No man ever prospered in the world without the consent and co-operation of his wife. If she unites in mutual endeavors, or rewards his labor with an endearing smile, with what perseverance does he apply to his vocation; with what confidence will he resort to his merchandize or farm; fly over land; sail upon the seas; meet difficulty and encounter danger—if he knows he is not spending his strength in vain, but that his labor will be rewarded by the sweets of home! Solitude and disappointment enter into the history of every man's life; and that he is but half provided for his voyage, who finds but an associate for happy hours, while for his months of darkness and distress no sympathising partner is prepared.

Temperance in Ireland.—A Roman Catholic priest, named Mathew, has succeeded in enrolling nearly half a million whiskey drinkers in Ireland, as members of the Temperance Society. It is a curious fact, that not one man out of all this number, who signed the pledge, has violated its observance.

Mothers after all.—Colonel Ethan Allen was a bold officer of the American Revolution. He could face the enemies of his country with the most undaunted bravery, and in the field of battle he never shrunk from danger. But he was an opposer to Christianity, and gloried in the character of an infidel. His wife, however, was a pious woman, and taught her children in the way of piety, while he told them it was a delusion. But there was an hour coming when Col. Allen's confidence in his own sentiments would be closely tried.

A beloved daughter was taken sick—he received a message that she was dying: he hastened to her bed-side, anxious to hear her dying words.

"Father," said she, "I am about to die; shall I believe in the principles which you have taught me, or shall I believe what my mother has taught me?"

This was an affecting scene. The intrepid Colonel became extremely agitated, his chin quivered, his whole frame shook; and after waiting a few moments, he replied, "Believe as your mother has taught you."

Brandreth's Pills.—Said a little boy to his uncle, "why do you keep counterfeit Brandreth's Pills?" "I will tell you," said the uncle, "I keep them as a test of honesty." There are many of my customers who wish to obtain goods on credit, and I do not know of any articles they will be more likely to call for than Brandreth's Pills. I make it an invariable rule to tell them they are not genuine, but an imitation; and when I find a man that is willing to purchase them, after being told that they are not genuine, I never trust him; for if he will sell to his neighbor an article, (and especially a medicine, which may destroy the life of his neighbor,) which he knows to be a counterfeit, he will cheat me if he has an opportunity.—*Phil. Eng'r.*

"What's the matter, uncle Jerry?" said Mr. ——, as old Jeremiah R. was passing by, growling most ferociously. "Matter," said the old man, stopping short; "why, here I've been lugging water all the morning, for Dr. C's wife to wash with, and what d'ye s'pose I got for it?" "Why, I supposed about ninepence." answered Mr. ——. "Ninepence! She told me the Doctor would *pull a tooth* for me some time."

A son of Erin, while hunting for rabbits, came across a *jackass* in the woods and shot him. 'By my soul and St. Patrick,' he exclaimed, 'I've killed the father of all rabbits.'